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Amebic Colitis (Amebic Dysentery).*

By W. E. DEEKS, M. A., M. D., Chief of Medical Clinic, Ancon Hospital,
and W. F. SHAW, M. D., Physician, Ancon Hospital.

Amebic colitis is an affection characterized by ulcerative lesions in the colon, due to a specific symbiotic protozoal organism. It may be associated with dysentery, sporadic or continuous. Amebæ, blood, pus and mucus are always present in the dejecta.

It is better to describe the affection as an amebic colitis, than amebic dysentery, as dysentery means frequent bowel evacuation with tenesmus, blood and mucus being constant factors in the stools.

The term amebic dysentery embraces those cases only with dysenteric symptoms.

We know, however, that amebic ulceration of the colon may be present for months unaccompanied by dysentery or bloody flux, and only the most careful stool examinations in connection with the local symptoms will reveal the true nature of the disease.

* Read at the Eighth Annual Meeting of the American Society of Tropical Medicine, held in New Orleans, May 18 and 19, 1911.

The importance of recognizing this cannot be exaggerated, inasmuch as the metastatic abscesses in the liver are prone to complicate just such cases. For example, of the seventy-two cases of liver abscesses operated on here, fifteen gave no history of previous dysentery.

If, therefore, we describe the affection under the name of amebic colitis, and familiarize ourselves with its clinical characteristics, apart from the frequently associated dysenteric symptoms, we are less liable to overlook it in its less active or more latent phase.

The medical profession is indebted to several investigators for our present knowledge of the etiological factor, the *Ameba dysenteriae*, of Councilman and Lafleur, or the *Entameba histolytica* of Schaudinn. Among others may be mentioned Losch, Koch, Kartulis, Halava, Osler, Celli and Fioca, Tsujitani, Musgrave and Clegg, Craig and Pasquale, Harris, Rogers, Mouton. From their combined investigations we learn that this organism is the only species of ameba which plays an important role in the etiology of amebic colitis. Other forms, or species of amebæ, have been discovered and described by different authors. Of these the most important is *Ameba coli*. These other forms may bear some relation to vicarious diarrhea and intestinal irritations, so often met with in the tropics, but have only a casual relation to the lesions peculiar to the *Entameba histolytica*. Schaudinn, in his careful and exhaustive work, has described the characteristics of the pathological organism so thoroughly, and its mode of multiplication and encystation, that there appears to be no room for doubt that the organism is distinctive, and it alone, of the various species of amebæ, is responsible for the pathological changes characteristic of amebic colitis.

The organism varies in size according to age and conditions in which its development takes place, but is the largest of the varieties of intestinal amebæ. There is also a very sharp differentiation between endosarc and ectosarc, and an indistinct eccentrically situated nucleus. These characters are in contrast to those of *Ameba*, or *Entameba coli*, where no sharp outline between endosarc and ectosarc exists, and the latter only appears hyalin in the pseudopodial extensions. The nucleus in the latter is large and vesicular, with a well-defined limiting membrane, and contains a centrally located nucleolus. Moreover, according to Schaudinn,

they differ in the manner of their reproduction. Whereas the *Entamebæ coli* multiply by division and spore formation, the *Entamebæ histolytica* multiply by division and budding. By staining methods the above mentioned differential characteristics become more pronounced. According to Craig, the ectosarc stains more deeply than the endosarc in the *Entameba histolytica*, and the reverse is the case with *Entameba coli*. The location and character respectively of the nuclei are also clearly defined.

There appears to be then a reasonable certainty that amebic colitis is due to a specific organism—viz., the *Entameba histolytica* of Schaudinn, or the *Ameba dysenteriae* of Councilman and Lafleur. Its dense hyalin ectosarc enables it to penetrate between the cells of the mucosa of the large intestine and bring about characteristic lesions. Schaudinn watched this process in the freshly cut intestine of an infected cat. Moreover, only the *Entameba histolytica* can envelop the red cells for which they have a chemotactic quality, as they always seek the bloody part of a stool or evacuated abscess, when left undisturbed for a short time.

What is the source of the infection?

Writers on the subject claim that there are two means by which infection occurs—through water and through uncooked vegetables. While we are inclined to the belief that it is possible to infect through uncooked vegetables, our experience here would indicate that water infection is the chief, if not the only source. A child eighteen months of age suffering from a characteristic attack, came under the observation of one of us (W. E. D.). This child had never had any nourishment but sterile milk. It drank freely, however, of water, from the house cistern from which the infection probably came. Since the water system has been installed, and good water supplied to the Zone and Panama, the sick rate for this affection has greatly lessened, though green vegetables from local gardens are much more consumed than formerly. We are inclined to the belief that the infection is in the cisterns, and quiet shady streams where other genera of harmless amebæ flourish, and rarely, if ever, infection occurs through uncooked vegetables and fruits. If then the infection takes place through water, is it not reasonable to assume that serious epidemics would probably occur, as many people drink from the same infected source?

In explanation of why this does not occur, the biological char-

acters of the organism suggest the clue. Musgrave and Clegg, and many others, have succeeded in cultivating the organism, but only in association with colonies of bacteria. It would seem, therefore, that bacterial symbiosis is absolutely an essential factor for the initiation of the pathological changes in the intestines by the *Entamebæ*. Such being the case, it suggests that the injection of the *Entamebæ* may be very general, the essential symbiotic organisms are not always present, and hence the apparent immunity from infection by some people. This is a very important point, not only in its relation to immunity, but also in its relation to the means of treatment to be employed.

From what has been stated above, it has been clearly demonstrated that amebiasis, in general, has no significance, and the presence of so-called non-mottle amebæ, is of no importance clinically, and must not be considered further in this connection. That the *Entameba histolytica* can be frequently found in the evacuations, when no dysenteric symptoms exist, we have often demonstrated here; and we have seen typical dysenteric stools follow, in these cases, the injection of an irritating solution such as silver nitrate or quinin. This suggests that either an ulceration of the rectum, sigmoid, or colon existed, and that the irritation of the solution lighted it up; or that the irritation of the solution in the bowel furnished, from its reaction, the necessary pabulum, or symbiotic organisms, to render active the entamebic processes.

We know that amebic ulceration of the bowel does exist frequently, and gives rise to no dysentery. On two occasions here Dr. Herrick operated on patients whom we thought to be suffering from chronic appendicitis, and found, in each case, an infiltrated ulcer of the cecum adjacent to the appendix, which afterwards proved to be amebic in character. Neither patient had any symptoms of dysentery, but complained of cutting intestinal pains, indigestion and constipation; and on palpation of the abdomen, tenderness over the lesion. A dose of magnesium sulphate followed by a careful microscopical examination of the evacuation will reveal the presence of *Entameba histolytica* in the stool in such cases, and thus decide the true character of the lesions.

What the symbiotic organism is we do not know. Kruse and Pasquale have isolated several varieties of colon bacilli found constantly present in the intestines of fatal cases, and have obtained

cultures from the solid organs of staphylococci, streptococci, *Diplococcus pneumoniae*, colon bacilli, typhoid, and *Bacillus aerogenes capsulatus*; but some of them undoubtedly were terminal infections, and not directly concerned with the production of the amebic lesions. In the dejecta of amebic patients, we frequently find ciliated and flagellated monads, but they are not constant and are found where amebæ are not present. Associated also are frequently seen, particularly in the West Indian and native population, eggs from the trichocephalus, ankylostoma, strongyloid, and oxyuris worms and rarely from the bilharzia. These, however, are incidental infections and bear no relation to the presence or development of *Entameba histolytica*, unless the mechanical lesions they may cause in the mucous membrane may form an easy point of entrance for the specific organism.

The seasonal variation appears in the accompanying table of the patients admitted to Ancon Hospital up to the end of December, 1910. As can be seen, the prevalence is greater in March, April and May, though it is always with us. In 1907, after the great influx of laborers, and before sanitary methods were perfected, we had the greatest number of admissions, 88. They were lowest in 1908, and increased again in 1909 and 1910. Two explanations exist for this: First, a better knowledge of the affection and a more patient search for the organism; and, second, during the last two years the colored laborers have been permitted to live outside of the Commission quarters, where the sanitary regulations and water supply cannot be so thoroughly supervised.

	Total Hospital Admissions	1905	1906	1907	1908	1909	1910
		7,666	13,172	14,312	15,738	18,531	20,122
January	1	2	5	5	5	2	
February	1	2	9	1	3	3	
March	0	3	12	4	7	2	
April	2	3	14	1	5	3	
May	0	0	10	1	7	6	
June	1	2	11	3	7	3	
July	1	8	6	3	0	3	
August	0	9	5	3	0	5	
September	0	6	6	2	3	4	
October	1	5	5	0	1	3	
November	2	6	3	2	4	2	
December	1	9	2	2	2	1	
Totals.....		10	55	88	27	44	37
Deaths	3	20	26	5	3	4	
Deaths, per cent..	30	36	29	18	6.8	10.8 (2.9)	

As can be seen from the above table, the proportion of amebic colitis cases admitted during the successive years in relation to the total admissions to the hospital of all patients, medical and surgical, is as follows:

1905, 1 to 766.	1908, 1 to 582.
1906, 1 to 239.	1909, 1 to 421.
1907, 1 to 159.	1910, 1 to 543.

With the exception of 1905 it can readily be seen that the last three years of admissions show a remarkable improvement over the two previous years.

NATIONALITY: In our analysis of 211 cases, published in the *Medical Record*, November 13, 1909, it was evident that race played little or no role, as an etiological factor. Evidence obtained since confirms this. All races are susceptible, and the number of cases occurring in each nationality is practically in direct relationship to the numbers respectively employed, irrespective of color.

AGE: The same can be said of the age. All are susceptible, from infancy to old age, and an analysis of our cases shows that though the greatest number of our cases occurred between the ages of twenty and thirty and thirty and forty, yet we have far more laborers between these respective ages than during the other decades.

LOCALITY: Every city and village from Colon to Panama contributed one or more cases. There is no epidemic focus, but a widespread infective district from which infection sporadically occurs. This argues strongly that water is the carrier of the infective agent.

OCCUPATION: This also is not an etiological factor, except as it may bring the individual into positions or conditions where contaminated water alone was available for drinking purposes. Cases occurred in individuals from every class of employment on the Isthmus.

LENGTH OF RESIDENCE ON ISTHMUS: Our analysis shows that infection occurred as early as one month after the arrival of the patient, and that cases developed in varying numbers between these new arrivals and those who were native or permanent residents. In other words, immunity, as we understand it, for other diseases, is not acquired by a long residence in the epidemic district. The affection can be contracted at any time, at any age, and in any race, irrespective of their occupations, if exposed to the organism, and the necessary symbiotic conditions are present for its develop-

ment. It is not uncommon to admit a patient with his first attack after fifteen or twenty-five years residence here.

In summing up the etiological factors, the only ones of importance are the *Entameba histolytica*, its symbiotic organisms, water as the medium of infection, and occupation which necessitates drinking the same, when contaminated.

PATHOLOGY: Councilman and Lafleur were the first to give us a thorough pathological description of the morbid process. Others have contributed from time to time, and Dr. H. C. Clark of this hospital has furnished us additional data. The lesions are confined chiefly to the cecum, appendix, sigmoid, and rectum, but may extend to the rest of the large bowel. Rarely are lesions seen in the extreme lower end of the ileum. This corresponds precisely with that part of the intestinal tract where the putrefactive bacteria live which give rise to a fecal odor. At first the lesions are coin shaped, one cm. in diameter, involving the mucous membrane and submucosa and filled with a mucopurulent viscid material occasionally mixed with blood; and the edges of the lesions are undermined and hyperemic. In severe processes these small ulcers run together, forming extensive sloughing ulcers, with more marked undermining; and extend through the muscular coats, and even the peritoneum of the bowel, thus causing perforation and peritonitis. The associated blood vessels are usually thrombosed; but mild, or grave and fatal hemorrhages may occur. The lesions may be so extensive as to involve the whole of the large bowel, which then appears as an edematous, honey-combed, necrotic, sloughing mass, in the tissues of which are the *Entameba histolytica*, with their symbiotic organisms performing their cytolytic or enzyme action. In some autopsies we have wondered how such extensive lesions could be compatible with life. As is well known, the physiological functions of the large intestine are concerned mainly with the final processes of digestion, absorption, and elimination. Here takes place the final act in the drama of enzyme and organized fermentation, when the fermentative and putrefactive bacteria play such an important role; also the liquid contents of the large intestines are absorbed, and the solid parts concentrated into mucous covered feces. It can be readily seen that in extensive lesions the physiological functions of the bowels are in abeyance, and dysenteric stools result; while in localized lesions, where only a small ulcer exists,

the bowels can functionate properly, and constipation may be a feature of the disease, thus giving a different clinical picture. Dr. Clark has drawn our attention to the frequency of involvement of the appendix in seven out of seventeen autopsies, and he further states that repeatedly this has been the only location where amebæ have been found. This is interesting in connection with the treatment which we will refer to later on.

For purposes of description the cases can be referred to under two heads—(1) those without dysentery, and (2) those with dysentery. The latter are acute or chronic, and the acute cases mild or fulminating. In the non-dysenteric subdivision the patient presents the symptoms of indigestion with irregular indefinite cramps, or, as the colored patients say, "Cuttings in the bowels." The appetite is poor, the tongue coated, and there may be constipation. Sporadic or mild dysenteric attacks or "loose bowels" may occur, but not sufficient to attract the patients' attention to the gravity of the underlying cause.

On careful palpation tenderness can always be elicited over some part of the large bowel corresponding to the site of the lesion. If the ulceration be confined to the cecum, it is difficult to differentiate from a chronic appendicitis. The temperature is very similar, 98 to 99, and the leucocyte counts also. There is some slight leucocytosis and increase in the polynuclears. The only possible method of diagnosing localized amebic colitis from appendicitis is by careful and repeated examination of the stools, particularly after the administration of magnesium sulphate. This drug produces a watery stool, and favors the elimination of amebæ. These in the dejecta, with the presence of pus, blood, and mucus, give conclusive evidence of the true nature of the underlying process. Another clinical observation has frequently been made when magnesium sulphate was administered, that it acts more severely when amebic lesions are present than when they are absent.

The dysenteric forms of amebic colitis are acute and chronic. In the former the symptoms are mild or fulminating in character. In the mild types the stools are from 4 to 12 in 24 hours. There is little prostration, practically no fever, and tenesmus only if there are lesions in the rectum. There is loss of appetite with coated tongue. These cases yield readily to treatment. The lesions have not penetrated beyond the submucosa, and the ulcers are very

little undermined. The tenderness over the lesions is a striking feature, however.

The severity of the milder types passes, gradually, into the grave or fulminating types, where the prostration and distress may be choleraic in character, and the tenesmus almost constant. In these cases the dejecta for the most part consists of necrotic mucous membrane, pus and blood-streaked mucus, in which the specific organisms are numerous. The temperature in uncomplicated cases is never high, even in these severe cases seldom reaching 102. It generally ranges from 99 to 101. This axiom may be formulated, that fever of more than 100 or 101 is not characteristic of uncomplicated amebic colitis.

On palpating the abdomen, the contrast between the tenderness over the large and small bowel is marked, and is an important differential diagnostic point between amebic colitis and other intestinal inflammations, where the small bowel is also affected.

There is one other symptom almost invariably present in amebic colitis, which is of great diagnostic importance, and that is the doughy, inelastic skin. When a fold is caught up and released it crawls more or less slowly back into position. We have termed this skin condition *myxenoid*. It is not confined to amebic ulceration of the bowel, but is present in almost every ulcerative, necrotic, or chronic inflammatory lesion of any of the abdominal viscera in greater or less degree. Its disappearance corresponds closely with the convalescence of the patient, and is one of the surest indications of his satisfactory progress.

The course of these acute cases is from 2 to 4 weeks when recovery occurs. On the other hand, they may progress rapidly to a fatal termination with a gangrenous, sloughing, perforated bowel and subsequent secondary infection. In some of these virulent cases, before the fatal termination, showers of amebæ seem to be liberated from the intestines and flood the liver, causing myriads of small necroses, or focal abscesses.

In the chronic cases, which may persist for years, the dysenteric symptoms are generally present, with periods of exacerbations and remissions. There are digestive disturbances and generally considerable emaciation. The tongue is heavily coated, and the myxenoid or doughy skin is present to a marked degree; also the tenderness over the colon. The patients are frequently anemic

and mentally depressed. The fever is slight and irregular, and the pulse small and compressible. Leucocytosis is variable, and the polynuclears are increased; but they are not characteristic features and depend upon the amount of confined suppuration present in the bowel. For example, in an uncomplicated case, four leucocyte counts varied from 9,000 to 33,000; in another, in three counts, from 6,500 to 8,600; and in a third, in six counts, from 9,000 to 24,200. In apparently uncomplicated cases we have had leucocyte counts varying from 3,200 to 39,000. Such variation precludes the possibility of leucocyte estimations being of any value in a differential diagnosis.

The acute general diseases, which most frequently complicate amebic colitis, are malaria and tuberculosis. Pneumonia caused one death in our series of 261 cases, and a complicating syphilis was responsible for another.

The cause of death in amebic colitis is, in the vast majority of cases, ulceration of the colon or appendix with perforation and peritonitis, and some secondary infection is associated in every fatal case.

Twenty-three per cent. of the deaths were due to complicating liver abscess, single or multiple. Though the liver is the chief organ for the metastatic development of the organisms, still we have had two pulmonary amebic abscesses and one cerebral in our series.

DIFFERENTIAL DIAGNOSIS: There are several forms of colitis with dysenteric symptoms on the Isthmus that are liable to be mistaken for the amebic type, unless very careful stool examinations are made. Probably the most important is the bacillary form, which is frequently fatal. The stools are similar in character to those of amebic dysentery, but do not contain amebæ. The greater constitutional disturbance and the higher temperature are differentiating points. The two, however, may occur together, and at autopsies we have occasionally seen diphtheritic looking membrane associated with amebic ulceration of the colon, evidently secondary to the amebic process. Malarial colitis primarily, or secondary to a severe nephritis of the diffuse type, is also common. The latter type frequently proves fatal. The malarial organisms in the blood, the severe nephritis, and the absence of amebæ in the stool are differentiating points. In these cases the pulse also is of some diagnostic

importance. It is almost without tension, the pressure falling below 100 mm. of mercury. Tubercular peritonitis and pellagra are frequently associated with severe dysenteric symptoms, but are differentiated from amebic colitis by their associated and constitutional symptoms. We have recently had a case of bilharziosis which Dr. Baetz reported. He gave most of the symptoms of a severe amebic colitis. Repeated examinations of the stools for several days were negative, till a sudden cessation of the dysentery was accompanied by swarms of bilharzia ova in the stools of the lateral spine type. One must not overlook also the severe febrile and intestinal disturbances due to the "toxalbumins" and "putrefactive alkaloids" of bad milk and tainted meat. We have had several cases here, when the symptoms were alarming. High temperatures, vomiting and epigastric distress were followed by severe diarrhea and tenesmus. They usually run a short course of four or five days and convalesce rapidly.

To summarize, the main points in the differential diagnosis are the character of the stools, with the presence of *Entameba histolytica*, the localized tenderness over the colon, the doughy myxenoid skin, and the absence of much fever in uncomplicated cases.

TREATMENT: In our former paper when we analyzed 211 cases, in view of the pathological findings, the symbiotic character of the organisms, and their local relation to the ulcerative processes, we stated that we believed that all local amebicidal agents were futile except for those amebæ liberated in the lumen of the bowel. Our clinical experience here, when solutions of quinin, thymol, nitrate of silver, boric acid, copper sulphate, starch with, and without laudanum, and tannic acid were used, justifies and accentuates that conclusion. It is inconceivable that any form of antiseptic solution can prove amebicidal to organisms in the submucosa or muscular coats of the intestines, with overhanging sloughing mucous membrane.

The standard treatment in most countries is that of ipecac by mouth. It has its advocates here on the Isthmus, and is in use in Colon Hospital. We have never used it in Ancon Hospital for the reason that, in the first place, the present method in vogue has given us eminently satisfactory results, and, secondly, the physiological action of the active principle of ipecac is unknown, and if it cures amebic colitis in the dosage and after the manner

described by its advocates, it must be tremendously bactericidal and amebicidal, else how can we explain such miraculous cures with a few ipecac pills, coated or not, with salol, which frequently pass through the bowel undissolved. The method has never appealed to our physiological common sense, and for that reason we have not even tried it. The method advocated in our November report in 1909 in its original form, is the one we again indorse and recommend. We quote from the report:

"Absolute rest is enjoined, and absolute milk diet, of which there should be an abundance; saline or water irrigations, and bismuth subnitrate in heroic doses. We do not object at the beginning if tenesmus and distress be very severe to an occasional hypodermic of morphin and atropin, but as a routine measure it is not considered good treatment."

Any method of treatment to be of value must be physiological. That the above meets this requirement we will now endeavor to prove. The pathological condition has been described above, also the symbiotic character of the organism; that is, the associated growth of some putrefactive or fermentative bacteria. In this connection it is interesting to note that the fecal odor in the bowels is confined to the colon, or extends slightly into the ileum, and the location of amebic ulceration corresponds precisely. It has been stated above that the lesions are generally confined to the cecum, sigmoid, and rectum. This can be explained on the basis that they are the more dependent parts of the bowel; or that it is the cecum where the amebæ first come in contact with the putrefactive bacteria, there meeting the organisms necessary to their existence; and it is in the rectum and sigmoid where the feces with their bacterial contents are longest in contact with the mucous membrane of the bowel.

It is with a consideration of these conditions that we advocate, after a preliminary dosage of castor oil, the following: First, rest, in order to increase the patient's resistance and give the minimum of movement to the bowel. This is classical treatment in all acute infections. Second, a generous milk diet, because it is a physiological, nutritious diet, admits of a minimum of intestinal putrefaction, and is practically all absorbed before it reaches the large bowel, which, owing to its ulcerative condition, is physiologically inert. Third, saline or plain water irrigations, one to three daily, purely for the purposes of lavage, in order to rid the bowel of toxic products. Fourth, the administration of bismuth

subnitrate in heroic dosage. We give a heaped teaspoonful, equivalent to about 180 grains by weight, mechanically suspended in almost a tumbler of plain, or, better, effervescent water, every three hours, night and day, in severe cases, only lessening the amount when improvement takes place. The mechanical suspension in a large amount of water is essential; otherwise it is prone to form a paste and ball up, thus losing its physiological effect. When the stools begin to lessen in number and the tongue becomes clean, the number of doses is lessened to three or four daily. In very chronic cases it is wise to continue one or two doses daily for a month after convalescence is established. The absolute milk diet is not departed from until the tongue cleans, the tenderness over the bowels disappears, the elasticity of the skin returns to normal, and the stools have been reduced to one in 24 to 48 hours; then a normal diet may be gradually resumed, as in convalescence from typhoid. We do not object to, but recommend, plain fruit juice once or twice a day, instead of the milk, during the acute attack.

How does bismuth subnitrate act?

In 1883 Theodore Kocher demonstrated that the insoluble preparations of bismuth were actively antiseptic. It is further known that, on the mucous membrane of the bowel, they have a local sedative and astringent action. To its antiseptic property undoubtedly its value is due, not because of its direct action on the amebæ themselves, but on the associated putrefactive symbiotic organisms, that are known to be essential for their growth. That the bismuth does not kill the amebæ is shown in some observations in Ancon Hospital by Drs. R. C. Conner and W. G. F. Baetz. They observed the bismuth crystals within the protoplasm of the active amebæ, without apparently doing them any harm. That bismuth subnitrate, on the other hand, does kill the putrefactive bacteria, and, secondly, the amebæ, is evidenced by the facts that in a very few days (three to six) the stools become black and odorless and the amebæ disappear from the stools. We have been unable to find them after the fourth day, though Drs. Conner, Baetz and H. R. Carter, Jr., have repeatedly sought for them.

During the passage of the bismuth subnitrate through the large bowel it becomes converted into sulphid. The nascent sulphur with which it unites, is a derivative of the proteids through the action of putrefactive bacteria. When the putrefactive bacteria are de-

stroyed, and no sulphur is further generated, the bismuth subnitrate passes through the bowel white and unchanged. This happens in from ten days to three weeks after the beginning of the administration of the bismuth salt in the above-mentioned dosage. It proves that the bowel can be rendered antiseptic as far as the putrefactive bacteria are concerned, and even indican disappears from the urine. The disappearance of the amebæ from the stools does not mean that they are all destroyed in the infected tissues, but that when they have escaped into the lumen of the bowel the conditions there are incompatible with their existence. As the absence, then, of amebæ in the stools is no evidence of their destruction, what evidence have we to show that the patient is cured? Only this: the complete convalescence of the patient, as indicated by the clean tongue, the restored appetite, the disappearance of the irregular temperature, tenderness over the bowel, and myxenoid skin, and the gain in weight. During convalescence other tonics may be indicated.

Untoward effects of large doses of bismuth are frequently referred to in the literature. We have had four cases here showing a form of bismuth subnitrate poisoning. Two were in patients suffering with diffuse nephritis, and associated acute colitis; one in carcinomatous colitis, and one in a case of pernicious malaria with diarrhea. The patients became cyanotic, but with full pulse and good heart action. Though the symptoms were alarming, they recovered at once after the administration of magnesium sulphate. The phenomenon was probably due to the liberation of nitrous oxid or some similar gas in the blood, through the decomposition of the bismuth salt.

One more drug should be referred to because of its general use in the treatment of this affection. We refer to opium and its derivatives. Though an occasional hypodermic of morphin and atropin may be administered at the onset of the attack, particularly if the tenesmus is severe, still we deprecate its general use in the treatment of this affection because (*a*) it interferes with the production of enzymes and enzyme digestion, and (*b*) because it lessens intestinal peristalsis, thus favoring the retention of toxic products which irritate the normal mucous, and which we should endeavor to eliminate.

Exceptional cases are occasionally met with, in such extreme conditions of emaciation and exhaustion, and showing such toxic

symptoms that it is not wise to temporize, but immediate surgical interference is indicated. The method which has given here the most satisfactory result is that devised by Dr. A. B. Herrick, of this hospital. He performs a wide-open cecostomy. It has three great advantages: (1) it prevents any ingested food from reaching the ulcerated surface of the colon, (2) it admits of a more generous and varied diet, (3) it enables free irrigation of the large bowel, so as to wash out toxic products. Its sole objection is the length of time it incapacitates the patients, because a restorative operation is necessary later. This, however, is of no importance, as by its means alone some lives can be saved.

No matter what methods of treatment are advocated, the burden of proof as to their respective values rests upon the results, temporary or permanent. Particularly is this true of amebic colitis, with its well-known tendency to recur or relapse. It will be our object now to analyze the results of methods of treatment conducted in Ancon Hospital from the beginning of 1905 to the end of 1910, a period of six years, and trace, as far as possible, the previous and subsequent histories of the patients for relapses and complications.

During this period we have admitted 261 cases, with a total mortality by all methods of treatment of 61 cases, or 23.3 per cent. They were admitted as follows:

TOTAL ADMISSIONS TO THE HOSPITAL, CASES OF AMEBIC
DYSENTERY, AND PERCENTAGE OF DEATHS.

YEAR.	Total Admissions.	Amebic. Dysentery.	Deaths.	Percentage of Deaths.
1905	7,666	10	3	30
1906	13,172	55	20	36
1907	14,012	88	26	29
1908	15,378	27	5	18
1909	18,531	44	3	6.8
1910	20,122	37 (34)	4 (1)	10.8 (2.9)

It can be seen at a glance that, notwithstanding our increase in hospital admissions, there has been, on the whole, a decrease proportionately of amebic cases, and a very marked decrease in the mortality in successive years. It has been argued that the lowered rate of mortality is due to improved sanitation. We are willing to concede that sanitation has wrought miracles in lessening the number of cases, but in mitigating their severity we join issue.

Some of the cases admitted here could not be more severe and be alive—in fact, some have died within twenty-four hours after their admission. Since July 1, 1909, to December 31, 1910, a period of eighteen months, fifty cases were admitted, complicated and uncomplicated, of all grades of severity. Necessarily in a hospital of this size, not all the cases came under one method of treatment. In this series of fifty cases it was fortunately so, because it enabled us to compare the results of the different methods adopted. Forty-three of the cases were treated with the method we recommend—that is, described above—which we shall indicate as the bismuth-milk-saline method of treatment. Two of these cases not making satisfactory progress on the fifth and twelfth days, respectively, had cecostomy operations performed.

Of these forty-three cases there was one death, a United States citizen of German birth, admitted March 7, 1910, with a double tertian infection in addition to his amebic dysentery. His temperature on admission was 102° . His urine contained hyalin casts, renal epithelium, pus, and albumin—evidences of a severe nephritis. His stool, in addition to the *Entamebæ*, pus, blood, etc., had ciliated monads. His temperature reached normal on the second day after his admission, remained so on the third and fourth, and he died on the fifth day, with a temperature of 104° . Unfortunately there was no autopsy, but the clinical course of the disease was that of a straight amebic dysentery, and the complications of a severe diffuse nephritis, with a double tertian infection, contributed to, if they were not responsible for, the fatal termination. Leaving this case out of consideration, we had 100 per cent of recoveries, or, including it, one case in forty-three, a mortality of 2.3 per cent. Of the remaining seven cases of this series, one was treated with quinin irrigations (1 to 1,000) in September, 1909, and returned with multiple liver abscesses the following January. Another with quinin irrigations, 1 to 2,000, and bismuth subgallate, grains x, with opium by mouth for seventeen days. He was admitted September 22, and his dysentery recurred November 6 of the same year. He was then given the treatment we recommend, and has not since returned. One case was not dieted, but took large doses of bismuth at irregular intervals. He relapsed and was later admitted to Colon Hospital. Two other cases died on the day of admission, and received no treatment but stimulation.

This leaves two to be accounted for. One, a Panamanian, died on the eleventh day after his admission, with a complicating disseminated tuberculosis, secondary to ulcerative pulmonary lesions. The cause of death in this case can scarcely be attributed to amebic colitis. The last case to be considered in this series was a Martiniquan admitted May 3, 1910. He was treated for ten days by the bismuth-milk-saline method, but, not improving, a cecostomy operation was performed, and he died the next day. The autopsy findings returned were: Emaciation, suppurative conjunctivitis, chronic aortitis, chronic adhesive pleuritis, acute splenic tumor, cloudy swelling of the kidneys and liver, and acute and chronic colitis (chronic amebic and acute healing process). The interesting feature about this case is that, notwithstanding this man's emaciated condition on admission and his lowered powers of resistance, the autopsy revealed, on the twelfth day after admission, with the bismuth-milk-saline method of treatment, acute and chronic *healing* ulcers from which "*smears failed to show amebæ*."

If, then, we leave the two cases that died within twenty-four hours after their admission out of consideration, and the case that died from tuberculosis, we have had in the last thirty-four cases with one death, or 2.9 per cent.

That amebic ulcers do heal under this method of treatment we have ample evidence to prove. As Dr. Clark informs us in three of the cases autopsied, when the dysenteric process was complicated by other diseases, but were treated by this method, two of them having had cecostomy operations as well, active pink granulations were found, running out from all the islets and strands of the mucosa not destroyed, which, in some cases, quite filled the ulcer. In this connection we will report the case of M. C., Hospital No. 86,158, colored, Jamaican, admitted October 11, 1910, with typical amebic dysentery, and a subnormal temperature which did not rise above normal until the fifth day. He was treated with the bismuth-saline-milk method, with a disappearance of the dysentery on the eleventh day. On the fifth day, however, his temperature began to increase and intermit, and he finally died on January 21, 1911, with a general disseminated tuberculosis and chronic nephritis. The interesting feature of this case was that the autopsy revealed a great number of old cicatrices throughout the cecum and rectum of the healed amebic type. Here was a case of curing the amebic

dysentery, in the presence of a developing fatal tuberculosis and chronic nephritis, and it is not a solitary example of this process. These healed cicatrices are stellate, pigmented, somewhat depressed, and contain a lace-like collection of arterioles, according to Dr. Clark, and the healed mucosa seems to functionate.

It has been stated above that the appendix is frequently involved, and is the only place in which Dr. Clark has been able to find amebæ at the autopsies of cases who had taken bismuth. This is interesting, because the appendix is almost inaccessible to the lower bowel contents which filter in from the cecum. As the cecum is very frequently involved, so is the appendix. The cecum, however, is more accessible to treatment, and heals before the appendix, where the putrefactive bacteria can subsist only as long as suitable pabulum is provided for them from the cecum. When this is rendered antiseptic, and cannot be further supplied, then the bacteria must die, followed by amebæ.

In ten of the seventeen cases autopsied by him, liver abscesses, single or multiple, complicated the dysentery. The complication is a very serious one, particularly if the abscess be of the acute fulminating type. They generally run a rapidly fatal course.

We have demonstrated that amebic ulcerations do heal by the bismuth-milk-saline method of treatment, even under the most adverse complicating conditions; now what about relapses or recurrences?

In our former report we made the statement that, up to that time, we had met with no relapses. That did not state that relapses did not occur, because the cases might have left the Isthmus or have been admitted to other hospitals. That the latter apparently occurred, we find from an article published in the *American Journal of the Medical Sciences* for November, 1910, by Drs. Brem and Zeiler, entitled "Ipecac in the Treatment of Intestinal Amebiasis." In it the following paragraph occurs:

"We have used the bismuth treatment advocated by Deeks and Shaw without success, but we did not give this treatment a thorough test. However, within a short time following the presentation of the paper by Deeks and Shaw to the Medical Society of the Canal Zone, we admitted to Colon Hospital five patients with recurrences of dysentery, for which they said that they had been treated with bismuth at Ancon Hospital. We cannot feel, therefore, that the conclusions of Deeks and Shaw are justified, and experience has taught us that it is very difficult in Panama to follow one's patients and to make repeated examinations of stools."

Through official channels the names of the men referred to were obtained, and from a study of the charts the following facts are submitted:

CASE I. R. A. K., admitted to this hospital as follows: May, 1906, with malaria, E. A.; August, 1906, with liver abscess, right empyema and malaria, E. A.; February, 1907, tonsilitis; February, 1909, ulcerative colitis; May, 1909, clinical malaria, and December, 1910, acute pleurisy. The only time he received bismuth was in February, 1909. He was admitted to the surgical side. On the ninth day he was placed on bismuth-milk-saline treatment for two days, then bismuth, one drachm three times daily for two days, then solid food was permitted, with more bismuth, and he was discharged on the seventh day after his treatment was begun, with a diagnosis of "ulcerative colitis." He had unfortunately received occasional doses of bismuth while on the surgical side, and no amebæ were found when he was transferred; otherwise a thorough treatment would have been insisted on. He certainly did not receive the treatment as we describe, and advocate it. We do not believe that ulcerative lesions of the bowel of any sort can heal in one week, and this man was discharged before even receiving full diet, evidently at his own request.

CASE II. J. B., admitted June, 1909; gave a history of being treated in Santo Tomas Hospital for three weeks about two months previously without improvement. He had true amebic dysentery when admitted here. Under the care of one of our physicians he was allowed solid food on the second day of his treatment, and the bismuth, which was given every four hours for five days, was then reduced to three times daily. The patient was allowed solid food practically throughout the course of his treatment, which lasted twenty-five days. We cannot get rid of the symbiotic organisms by the use of bismuth when solid food is administered. This is a case in point. Eggs, soft boiled, were allowed to this patient on the second day of his treatment, and these are contraindicated when putrefactive bacteria exist, and when they must be destroyed, as in amebic colitis, before convalescence can ensue.

CASE III. C. P., a coffee-planter, was crossing the Isthmus from Nicaragua, where he had acquired the affection. The previous year he had been treated for three months in the Hospital for the School of Tropical Medicine in Liverpool. He was treated here for eleven

days. On the fourth day his dysenteric symptoms disappeared and he insisted on continuing his journey on the eleventh day. His ulcers could not be healed in that time, but, for business reasons, he would not remain longer.

CASE IV. H. C. was admitted here in August, 1910, with what was diagnosed as acute colitis. No amebæ were found in the stools. On the third day of his admission he received a dram of bismuth three times daily; on the fourth and fifth, one dram every three hours, and he was discharged on the sixth morning. He received full diet throughout.

One subsequent recurrence in Colon Hospital is mentioned.

CASE VI. C. S. He was in the hospital for two weeks; received one drachm of bismuth three times daily, and was on soft and full diet throughout.

Not one of these cases received the treatment as we recommend it, and therefore cannot be looked upon as failures. The administration of bismuth is one thing; the administration of it, as we recommend under the dietetic restrictions, is absolutely another, and should not be confounded. Some patients consider it a hardship to remain two weeks on milk diet. They become dissatisfied and leave before a cure is effected. These are the cases which relapse and seek relief elsewhere.

In order to ascertain as far as possible the frequency of relapses that have occurred in Ancon Hospital, we have examined carefully the records of our 261 cases as to the number of times of their admissions here and the nature of their illnesses. We have been able to trace the records of forty-two cases only, admitted more than the one time when they were treated for dysentery. Some have undoubtedly left the Isthmus, and some have been admitted to other hospitals. Of these forty-two cases, with one or more subsequent visits to the hospitals, twenty-five were treated by the bismuth-milk-saline method as we recommend, and we could find not one recurrence following. In other words, 100 per cent of perfect recoveries. Of these, one had been previously treated with quinin irrigations.

Of those who had been treated by other methods in vogue here, such as irrigations of different kinds, bismuth subnitrate in small doses, with or without opiates, opiates alone, bismuth subgallate, etc., there were seventeen, of whom ten relapsed once or twice, or 59 per cent. This is eloquent testimony for the bismuth-milk-saline method

of treatment. All of these cases had from one to eight subsequent admissions, and in almost all cases the stools were routinely examined at every admission. In those considered as cured in subsequent admissions, no history was given of having had dysenteric or diarrheal symptoms following their treatment.

What evidence have we as to the development of a liver abscess after treatment by the bismuth-milk-saline method? There have been seventy-two cases of liver abscess admitted to this hospital. In one case only this method of treatment was administered, at a previous hospital admission, and that for three days only. No reasonable man can expect to cure dysentery with any form of treatment extending over that short time. We have every reason to feel, therefore, from clinical experience and pathological evidence, if the treatment be carried out as we have detailed above, we can anticipate perfect cures; no relapses and no metastatic abscesses. This holds good for acute as well as chronic cases. Our statistics show that those who sought hospital relief early, after the onset of the disease, were those most quickly cured; still, chronicity is not a hopeless deterrent factor, and relief quickly follows treatment. We have had chronic cases here, which were contracted in the United States, Brazil and the Philippines. These had resisted treatment for years, but recovered promptly under the bismuth-milk-saline method of treatment. One case had been under treatment for eleven years, during which time he had formed stools for six days only. Twelve days' treatment in the hospital, and about a month outside, with reasonable diet precautions, brought about a perfect result.

It has been stated above that the *Entameba histolytica* is symbiotic. Further, that metastatic abscesses are frequently found in the liver, and occasionally in the lungs and brain.

In the latter two situations they are generally found secondary to those in the liver, and are secondarily affected, thus having associated bacteria to elaborate their nutriment.

We need, then, consider only those abscesses which develop in the liver, and which, for the most part, are sterile, showing no evidence of symbiosis.

In explanation of this it may be said that symbiosis means that the elaboration of metabolic products by the one is necessary to form suitable pabulum for the other organism.

The liver is the great metabolic gland of the body, where the

absorbed products from the gastro-intestinal tract in the portal circulation are elaborated. It is more than probable that this medium is all that is necessary to form suitable nourishment for the entamebæ when they have gained access to it through the portal circulation. It has been suggested that the amebæ carry their symbiotic organisms with them when they form metastases. If this is true, then cultures ought not to be so frequently sterile. They are the result, for the most part, of necrotic liver tissue through the action of the *Entameba histolytica*, which have on the tissues the action of an enzyme. We have seen a case here where an enormous slough slowly developed from an initial liver abscess. All the tissues melted before its progress, and no measures seemed to stay its course.

We believe that the frequency of liver abscess and its comparative absence in other organs, except when secondarily infected, can be best explained on this theory, that, in the liver, the cell metabolism elaborates a medium suitable for the development of the entamebæ, which in the intestines require a symbiotic organism.

We have, in conclusion, not only shown results, but have given a reasonable physiological explanation of them, and are willing to submit our results to other workers for criticism or approbation. No matter what may be said, the conclusions we have arrived at are drawn from, and rest on, the analyses of case records.

SUMMARY.—(a) Amebic colitis is due to a specific organism, the *Entameba histolytica*, probably water-borne and symbiotic in character.

(b) There is no endemic center.

(c) Immunity, as we understand it, does not exist.

(d) Age, locality, nationality, or occupation plays no rôle in the etiology.

(e) The pathological lesions are peculiar and characteristic.

(f) Amebicidal irrigations are useless.

(g) The bismuth-milk-saline method of treatment gives, in almost all cases, a perfect result, if the lines indicated above for their administration are adhered to.

(h) Occasionally, in extreme cases, surgical interference, after Dr. A. B. Herrick's method, is indicated.

(i) This method of treatment gives a maximum of cures with a minimum of recurrences and metastatic development, the most

frequent of which is liver abscess. This offers a serious complication in the treatment, particularly if of the acute or fulminating types.

The Medical Treatment of Amebic Dysentery.*

By WALTER V. BREM, M. D., and A. H. ZEILER, M. D., Colon Hospital, Cristobal, C. Z.

INTRODUCTION.—The criteria by which the efficacy of any treatment of amebic dysentery must be judged are: 1, Mortality; 2, complications; 3, relapses; 4, relief of symptoms; 5, eradication of infection.

Comparisons of mortality under different treatments of small series of cases of any disease, or of series of cases occurring during one year with those of another year, or of one place with another place, are notoriously unreliable. For reliability the different series must be large, the time must be the same, the place the same, and the patients must be drawn from the same classes living under approximately similar conditions. The prerequisites are difficult to fulfill, and in amebic dysentery it can be done only imperfectly in Panama. Though the classes from which we draw are approximately the same and live under approximately similar conditions, the number of cases is not large and the different treatments have not been tried with alternating cases during the same period of time. Mortality comparisons are, therefore, of subordinate value, and must be considered only in connection with other more important criteria.

A comparison of the frequency of complications occurring under different treatments of amebic dysentery has been of little value in our experience, for we have had in Colon Hospital no instance of perforation, and in only one instance did abscess of the liver develop while the patient was under observation. The other twenty-seven liver abscesses that have occurred during the period of time covered by the cases that we shall report, were present when the patients were admitted to the hospital, and none were in patients whom we had

* Read at the Eighth Annual Meeting of the American Society of Tropical Medicine, held in New Orleans, May 18 and 19, 1911.

previously treated. We do not feel, however, that the absence of complications was due to special treatment, but to variations in the disease such as occur at different times and in different places. These considerations render complications, also, unreliable as criteria of the efficacy of treatment.

Relapses or recurrences would be important if patients could be kept continuously under observation for a long period of time. It is well known, however, that amebic infections may remain latent for months and years and then produce recurring dysentery. Furthermore, in Panama patients may choose between two hospitals or they may be treated in their quarters—that is, they may not return during a relapse to the same hospital in which the primary attack of dysentery was treated. This fact, together with the facts that the force of employes is constantly changing, and that those with ill health often return to their homes, makes it impossible to state with any degree of accuracy the percentage of relapses, and renders that criterion of small value.

The criterion of relief of symptoms is of some importance, but as a matter of fact, under any method of treatment with rest in bed and proper diet, the great majority of patients with amebic dysentery will recover spontaneously and quickly from active dysenteric symptoms. Moreover, this temporary recovery does not exclude the possibility of the future development of abscess of the liver or of recurrence of the dysentery. Nine out of twenty-eight patients with liver abscess denied having ever had dysentery, and the histories of at least three of these can be relied upon. Four more had had dysentery from one to four years previously, with no intestinal symptoms in the meantime. Amebas were found in the stools of seven of these thirteen patients and in the liver discharges of three others. The stool records of three are negative, and in these histories no examination of the liver discharges is recorded. One patient who denied having had dysentery came to autopsy. No amebas could be found in the stool or scrapings from the colon and there were no ulcers or evidence of healed ulcers in the intestines. The liver, however, showed multiple abscesses and numerous amebas were found in them.

Two other patients, who had not had dysentery for six and seven years previously, came to autopsy. Both had ulcerative colitis and amebas were present in the scrapings. Such experiences force one to believe that the mere presence of amebas in the colon, without the symptoms of dysentery, is a constant menace to the individual, and that the relief of symptoms in itself is not a safe criterion of efficient treatment.

Eradication of infection, with the consequent impossibility of future liver abscess and of recurrences, is, therefore, the prime consideration and the ultimate test of treatment. This test can be fulfilled only by repeated negative examinations of stools during a reasonable length of time after treatment has been discontinued.

GENERAL TREATMENT.—There is practically unanimity of opinion regarding the general treatment. It is directed towards keeping up the nutrition of the patient by proper rest and diet, and the relief of symptoms by diet, drugs and soothing enemas. Rest in bed during the acute stage of the disease or when the patient's general condition is bad is essential. The diet should consist of milk, rice water or barley water during the acute stage. A more liberal diet should be given as soon as possible. Herter and Kendall¹, and Kendall² have recently shown that carbohydrates, especially lactose, furnish a poor medium for the intestinal putrefactive bacterial flora. It is probable, therefore, that lactose would be a valuable addition to the dietary in amebic dysentery. For the relief of pain and tenesmus, and for rest, some form of opium, preferably morphine hypodermically, is imperative. We believe that it should be given freely and that no harm results from its use. Bismuth subnitrate oftentimes seems to check diarrhea and to lessen the duration of acute symptoms. Enemas of normal salt solution clear out the colon and are frequently soothing to the patient. Also, small enemas of starch water and laudanum may be very effectual in relieving irritation and tenesmus.

SPECIFIC TREATMENT.—The specific treatment aims at the eradication of the infection. Many measures have been pro-

1. Herter, C. A. and Kendall, A. I.: *Jour. Biol. Chem.*, Baltimore,, February, 1910.

2. Kendall, A. I.: *Boston Med. and Surg. Jour.*, Sept. 8, 1910; *Jour. Amer. Med. Assn.*, 1911, lvi, 1084.

posed in an attempt to accomplish this, and the most widely used has been the local application, by means of enemas or irrigations of parasitocidal agents. Recently the administration of bismuth subnitrate in heroic doses by mouth has been proposed. Ipecac by mouth is an old and time-honored remedy in dysentery, but it is only recently that the disappearance of amebas following its administration has been demonstrated.

IRRIGATION TREATMENT.—Quinin solutions have been most commonly used in the local treatment of amebic colitis. The strength of the solutions has varied from 1 to 5000 to 1 to 500, and large enemas of at least two litres have generally been advised. These have been given once or twice daily over long periods of time, and the patient has been encouraged to retain them for ten or fifteen minutes and at least five minutes. They have often been preceded by a small enema of starch water and laudanum in order to diminish the pain and thus to aid the patient to retain them longer. The patient should be turned upon his right side and his hips elevated. Thomas³, in his investigations of the action of various chemicals upon cultures of an ameba isolated by Musgrave, showed that thymol had a specific action against this ameba in culture, and that quinin had the strongest bactericidal action of all the agents tested against the symbiotic bacteria; that is, in the solutions available for use in the intestines. In view of Thomas' results we felt that a combination of quinin and thymol might offer a useful method of getting rid of the infection, and in numbers of cases we used enemas with both of the drugs in solution in strengths varying from 1 to 2000 to 1 to 500 of each.

We have used, also, in a limited number of cases, simple irrigations of normal salt solution, one or two daily. Seven patients were treated merely with rest in bed and dieting, and they serve in a measure as controls. In nine cases appendicostomy was resorted to.

The following table indicates the results of the above measures. In constructing it we accepted as amebic dysentery only those cases with intestinal amebiasis that showed the active phenomena of dysentery (blood and mucus in stools, abdomi-

3. Thomas, J. B.: *Amer Jour. Med. Sc.*, January, 1900, cxxxi, No. 1.

nal pain, diarrhea and tenesmus). A few cases with persistent or recurrent diarrhea with amebas, but without blood, were accepted. Many histories diagnosed amebic dysentery, but showing only amebiasis with sometimes a slight diarrhea, were excluded. Also, a few histories that showed fever with violent dysentery and purulent stools were thrown out, as these were considered bacillary dysentery with incidental amebiasis. Others with no violence of amebic infection were excluded.

TABLE.

TREATMENT.	Total No. of Cases.	No. Cases Discharged Well.	No. Cases Improved	No. Cases Not Improved.	No. of Deaths.	No. Relapses Among Recovered Cases.
Quin. enema	40	32=80 %	5=12.5%	1=2.5%	2=5%	8=21 %
Quin. and thymol.	34	25=73.5%	7=20.6%	—	2=6%	3=9.4%
Saline irrigations.	14	10=71.4%	3=21.4%	1=7 %	—	1=7 %
Rest and diet.....	7	6=85.7%	1=14.3%	—	—	—
Appendicostomy and irrigations..	9	4=44.4%	—	—	5=55.5	2=50 %
Total.....	104	77=74 %	16=15.4%	2=2 %	9=8.6%	14=14.6%

In a table such as this, made up from old history records, there is a large chance for error in interpretation, excepting in the matter of deaths and relapses. It is certain that the number of relapses, however, should be greater, as the figures represent only the patients that returned to Colon Hospital. It is probable that some patients were treated during relapses at Ancon or other hospitals in the Canal Zone. Patients frequently drift from one hospital to another, especially in the case of a chronic disease like amebic dysentery, when the treatment has been severe and sometimes unsatisfactory. In the table the terms "well," etc., refer only to results as far as symptoms are concerned. Appendicostomy was done only on the patients that did not improve under medical treatment or in those who were in a critical condition on admission. One patient who had received enemas of quinin and thymol frequently during forty-nine days, developed, at the end of that time, a liver abscess from which he died.

As to the question of the eradication of the infection, the examinations recorded at the time of discharge are incomplete. Of the 38 patients discharged who had been treated with

quinin irrigations, at least 7 had amebas in their stools when discharged; of the 32 quinin and thymol treated patients, at least 8 were still infected when discharged; of the 4 discharged appendicostomy patients, at least 2 were still infected.

On the whole, though the mortality is relatively low, the results are far from satisfactory, and judging from the results in patients whom we personally treated and followed, we are sure that the majority of those represented by the table still harbored amebas when they left the hospital. Moreover, the irrigation method is exceedingly painful and distressing to the patient; it is also exhausting and is apt to interfere with nutrition and to lower resistance. The results obtained in the seven patients treated merely by diet and rest in bed were equally as good, if not superior, to the drastic treatment by irrigation. With other methods of local treatment per rectum we have had little or no experience, but the reports of treatment with them are not more convincing than those of treatment with quinin. Silver nitrate, copper sulphate, bichloride of mercury, potassium permanganate, creoline, and other agents have been used. Hanes⁴ has made an interesting report of the use of coal oil, with which he has obtained the best results. Hanes has found that it is possible to introduce into the colon undiluted coal oil in quantities up to two litres without great distress to the patient and without untoward results. He believes that with it he can cure amebic colitis with extensive ulceration. Hanes has not yet reported the subsequent histories of his patients with subsequent stool examinations.

BISMUTH TREATMENT.—Deeks and Shaw, of Ancon Hospital, have described a treatment which they term “the rest-supportive treatment”⁵. It differs from the irrigation treatment only in the exclusion of irrigating enemas and in the use of “heroic” doses of bismuth subnitrate. The beneficial effects from the bismuth they attribute to its antiseptic properties, by which they think that it “destroys or inhibits bacterial fermentative and putrefactive processes which favor the growth of amebæ, while not interfering with enzyme digestion

4. Hanes, G. S.: *Jour. Amer. Med. Assn.*, 1909, lli, 1990.

5. Deeks, W. E., and Shaw: *Med. Record*, Oct. 13, 1909.

throughout the alimentary tract." They think, also, that while coating over the mucous membrane it acts "as a mechanical sedative and astringent." These authors support their views by a comparison of the mortality under their treatment with the mortality of patients previously treated at Ancon Hospital by other methods, and by the fact that on looking over their charts they found "not a single case of relapse since this method of treatment has been adopted." They do not present any data on the important question of the presence or absence of amebas in the stool when the patients were discharged or of re-examinations of stools subsequent to discharge.

The mortality in 129 cases treated by their method was 18 per cent. During approximately the same time the mortality at Colon Hospital in 104 cases reported above, which were treated chiefly by irrigations, was 8.6 per cent. Deeks and Shaw do not state whether or not in their series deaths from liver abscess were included in their 129 cases. Deaths from liver abscesses that were present on admission to the hospital were not included in our figures. If, however, the 19 patients admitted with liver abscess during this time, among which were 12 deaths, are included in our series, the mortality of the 123 cases was 17 per cent, which is practically the same as occurred in their 129 cases, 18 per cent. As far as mortality is concerned, therefore, the bismuth treatment is not superior to the irrigation treatment.

In the matter of relapses, Deeks and Shaw state that they have been unable to find a single case that relapsed. In our series there were 14.6 per cent of relapses, and in this important particular the irrigation treatment does not appear to compare favorably with the bismuth. Though relapses may be infrequent in the latter, we are sure, however, that a certain number do occur. In a former report⁶ we referred to five of our amebic dysentery patients who gave a history of having been treated with bismuth for dysentery in Ancon Hospital. We have had an opportunity since then to examine the Ancon records for the histories of these patients, with the following results:

6. Brem, W. V., and Zeiler, A. H.: *Amer. Jour. Med. Sc.*, November, 1910, cxi, 669.

Case 1.—The patient had not been treated at Ancon Hospital for dysentery.

Case 2.—James Brady. The patient had not been treated, at least under this name, at Ancon. James Bradley, "Englishman," 24 years old, corresponding to the history given us by James Brady, "American," 24 years old, had been treated at Ancon for amebic dysentery about the time given by James Brady, and, as stated by Brady, had shortly before been treated at Santo Tomas Hospital for dysentery. Bradley received 5i, or 5iii by weight (Deeks and Shaw), of bismuth every four hours for six days, then 5i (5iii) three times daily for thirteen days. Diagnosis, amebic dysentery. Result, well. Brady was admitted to Colon Hospital with amebic dysentery three months after Bradley was discharged from Ancon Hospital.

Case 3.—R. A. King. Treated with bismuth at Ancon. Previous history of liver abscess, operated on at Ancon, amebas in liver pus. No amebas found in stools—2 examinations. Bismuth 5i (5iii) q. 2 h. one day; 5i (5iii) q. 3 h. three days; 5i (5iii) t. i. d. five days. Diagnosis—ulcerative colitis. Result—well. King was admitted to Colon Hospital with amebic dysentery four months after his discharge from Ancon Hospital.

Case 4.—Fred Allen. Treated for dysentery in Ancon Hospital. 'Bismuth and Dover's capsules iii' q. 4 h. 10 days. Diagnosis, acute enteritis. Result well. Allen was admitted to Colon Hospital with amebic dysentery two weeks after his discharge from Ancon Hospital.

Case 5. Charles P. C. Potter. Treated for amebic dysentery in Ancon Hospital. Amebas found in stool. Bismuth 5i (5iii) q. 3 h. three days; 5i (5iii) t. i. d. eight days. Diagnosis, amebic dysentery. Result, well. Potter was admitted to Colon Hospital with amebic dysentery 17 months after he was discharged from Ancon Hospital. He gave a history of having had recurrent attacks of dysentery since he was discharged from Ancon Hospital.

In addition to these patients, another patient has been admitted to Colon Hospital who gave a similar history of

treatment with bismuth at Ancon Hospital. We have looked up his Ancon record, also.

Case 6.—Charles Smith. Treated for diarrhea at Ancon Hospital. Amebas found in stools. Bismuth 5i (5iii) t. i. d. eleven days. Diagnosis, amebic dysentery. Result, well. Smith was admitted to Colon Hospital with amebic dysentery 9 months after he was discharged from Ancon Hospital.

It is to be presumed that relapses will occur under any form of treatment at present known, and these few cases do not argue in themselves strongly against the bismuth treatment, but they do show, together with our comparison of mortality statistics, what we implied in our former paper, that relapses do occur, and that the bismuth treatment is not far superior to the irrigation treatment. The number of the above six cases that should be considered amebic dysentery with relapses must vary with one's point of view. We think at least four of them should be so classed, and probably five.

We have examined one other patient who was treated with Bismuth for amebic dysentery at Ancon Hospital thirteen months previously, and we were unable to find amebas in his stools.

Dr. George H. Crabtree, Superintendent of Culebra Hospital, has kindly given us some notes on a small epidemic of amebic dysentery. Among the case records is one of a patient that received a heaping teaspoonful of bismuth every three hours for two weeks. During this time there were two stool examinations negative for amebas. Bismuth was then discontinued, the bowel washed out with salt solution, and a saline cathartic given. Amebas were then found in considerable numbers. This case brings out the point that amebas may be difficult to find when the bowel is coated with and the stools are full of bismuth.

To sum up, we do not think that the bismuth treatment has been proved to be far superior to the irrigation treatment either by the criteria of mortality or relapses. There is no basis for discussing the relative occurrence of complications. As to relief of symptoms and the ease and agreeableness of its administration, it has distinct advantages. The ultimate

test of efficacy, however, the eradication of the infection, has not been touched, and until a series of cases have been followed and repeated negative examinations of stools made over a reasonable length of time (say four weeks or more) its superior value as a therapeutic agent in amebic dysentery cannot be admitted. We say four weeks or more, for it seems fair to assume that there is reinfection if, in an ameba infested country, amebas reappear in the stools after four weeks time, provided that a number of careful examinations have been negative following saline cathartics. In a former paper⁷ we showed that amebas were present in 24.5 per cent. of 359 colored employees of the Isthmian Canal Commission. The chances of reinfection in Panama are, therefore, considerable. We have found what was presumably a reinfection in two of our patients in whom the original infection had been eradicated. In one instance, after nearly five months, during which stool examinations were negative, one small ameba was found. It appeared to be an *Entameba coli* and seemed to be only a transient guest, for a subsequent examination, one year after treatment, was negative. In the other case, after repeated negative examinations, amebas were found about seven months after treatment. When amebas have reappeared in the stools after a temporary absence due to treatment, they have usually been found within two weeks and always within a month.

IPECAC TREATMENT.—The history of ipecac in the treatment of dysentery is an interesting and varied one. In 1876 Woodhull⁸ of the United States Army published a monograph on the subject and reviewed the literature up to that time. He cites a writer who, as long ago as the middle of the seventeenth century, claimed for ipecac a specific action in dysentery. Woodhull himself strongly urged it upon the medical profession and reported cases showing striking results following its administration. English physicians in England and in the colonies have long advocated its use, and Manson especially has insisted upon it, regarding it as a specific in amebic dysen-

7. Brem, W. V., and Zeiler, A. H.: *Archives Int. Med.*, 1910, v, 569.

8. Woodhull, Alfred A.: Non-emetic use of Ipecacuanba, J. B. Lippincott & Co., 1876.

9. Dock, G.: *New York Med. Jour.*, July 10, 1909.

tery. Recently Dock⁹ and Simon¹⁰ have published papers reporting excellent results in amebic dysentery from the use of salol coated pills of ipecac. Rogers,¹¹ working in India, reported that he is able to prevent by its oral administration the development of abscess of the liver even after definite signs of hepatitis had developed. He cites cases in which the patient recovered without operation when there were present pain, enlargement of the liver, remittent fever, and leucocytosis. He speaks of this condition as the presuppurative stage of amebic hepatitis.

Last year we reported⁶ to this society a series of cases of intestinal amebiasis with and without dysentery that we had treated with salol coated ipecac pills. In fourteen out of eighteen cases the infection was eradicated, and of these fourteen cases eleven were followed and repeated stool examinations made for six weeks to five months. We have been able to re-examine three patients after a year or more has elapsed and they are still free from amebas. In four cases, which we discussed in our former paper, we failed to eradicate the infection. These patients were not thoroughly treated.

Since the above series of cases was reported, we have added to the number ten more, making in all twenty-one cases of intestinal amebiasis *with* dysentery treated with ipecac.

We have had no deaths from amebic dysentery since we began to use ipecac. No complications have developed. The relief of symptoms has usually been prompt, though some diarrhea usually persists during its administration, and sometimes continues for a short while afterward. Only one patient relapsed. This one had three recurrences and appendicostomy was finally resorted to. Ipecac suspended in starch water was introduced through the appendix and amebas disappeared from the stool within three days. Many subsequent examinations during 124 days have been negative. Seven doses (45 to 85 grains each) of ipecac were administered in this manner, the bowels being previously flushed out with normal saline solutions. The dysentery promptly ceased and improvement was rapid. The patient has been employed as an orderly in

10. Simon, S. K.: *Jour. Amer. Med. Assn.*, 1909, liii, 1526.

11. Rogers, L.: *Philippine Jour. of Sc.*, 1908, iii, 285.

the hospital, so that he can be carefully followed. (Case 1 of Case Reports.)

We have said that we consider the eradication of the infection the most important criterion of the efficacy of any treatment. We have apparently fulfilled this test with ipecac in twenty of the twenty-one patients. The time we were able to follow the patients and make repeated examinations of stools was as follows:

12 patients followed 1 to 15 months.

3 patients followed 2 to 4 weeks.

5 patients followed less than two weeks.

In one patient, referred to above, dysentery recurred and appendicostomy was finally done, the ipecac being introduced through the appendix. In another patient, though there was no recurrence of dysentery, the amebas reappeared within eight days after each of two thorough treatments with ipecac by mouth. (Case 11.) Ipecac was then suspended in starch water, introduced per rectum, and followed by a small quantity of normal salt solution. Nine treatments were given. The small rectal ulcers were watched by means of the proctoscope and were seen to heal, becoming completely covered over by mucous membrane. Five stool examinations during two weeks following the ipecac enemas were all negative for amebas.

The twenty-first case received a thorough treatment by mouth, after which amebas reappeared. He was then given six doses of ipecac (60 grains each) by the rectal method. Amebas were still plentiful.

In addition to these cases, we have the notes referred to above of seven other cases treated by Dr. Crabtree. Two of these patients were treated with quinin irrigations for five and 22 days respectively with some relief of subjective symptoms in one case, but with persistence of amebas. They were then given ipecac with prompt recovery and the amebas disappeared. Examinations of stools were negative during 27 and 4 days, respectively, following treatment.

The third patient was treated with bismuth, as reported above, for two weeks. The dysentery cleared up, but amebas were still present. Ipecac was then given and amebas dis-

appeared. Four stool examinations were negative during 16 days following treatment.

The fourth and fifth patients were treated with ipecac from the beginning. One of these did not have active dysentery. Amebas disappeared promptly in both cases, and five and six stool examinations, respectively, were negative during 16 and 26 days.

These patients were prisoners and were under observation for 5 weeks to 7½ months after treatment. There were no relapses.

The sixth and seventh patient were also treated with ipecac with relief of symptoms, but with persistence of amebas.

The maximum dose of ipecac used was 30 grains daily, usually in divided doses. Dr. Crabtree writes that he is now sure that the coating of the pills was excessive and the doses too small, and he believes that these factors may have been responsible for the failure to cure the last two patients.

We have discussed in detail in our previous paper the method of administering ipecac and the diet indicated. In our first cases we used pills with a thin salol coating prepared for us by one of the large drug houses in the United States.¹² Although these pills usually caused some vomiting in four to eight hours after administration, the pills themselves were never free from the objection that the salol used in the coating makes up a quantity too large for safety. After they had been kept for some time, however, they hardened and were useless, because they passed through the intestinal tract intact. Therefore, the pills should be freshly prepared. We ordered a thicker coating (1/16 inch) on our second lot of pills, following the recommendation of Simon.¹⁰ These pills also passed through the intestinal tract with the coating undissolved. Simon pointed out to us that a fresh thick coating of fused salol was readily soluble, and since then we have attempted to prepare our own pills. Our results have not been very satisfactory. It is difficult with fused salol to obtain a mean between a coating thick enough to prevent vomiting and one thin enough to insure a quantity of salol sufficiently small to

12. In view of the fact that we have received a number of letters requesting information as to where we obtained our pills, we think it well to state that they were supplied by Messrs. Sharp & Dohme.

be used with safety. Herrick¹³ has weighed the quantity of salol required to coat ten 5 gr. pills after the method recommended by Simon, and has found that the aggregate amounted to 300 grains. We filled 10-grain capsules with ipecac and weighed them before and after coating them thinly with salol. The salol on six capsules weighed 1.2 G. With these capsules we have had fair success, but the results have not been as good as with the first pills, to the use of which we have returned.

THYMOL TREATMENT.—Our cases of uncinariasis are frequently complicated with amebiasis. After we began to treat the former with very finely ground thymol mixed with milk sugar, we observed, in a few instances, the disappearance of amebas. One case of amebic dysentery of long standing cleared up quickly after one thymol treatment, and amebas were absent on two subsequent examinations. They then reappeared in small numbers, however, and were present on discharge of the patient, though there were no further dysenteric symptoms. The amebic infection was permanently eradicated by thymol in the case of another patient who had had dysentery several months previously.

SUMMARY AND CONCLUSIONS.—1. The most logical and most important criterion of the efficacy of any treatment of amebic dysentery is the eradication of the infection.

2. The general treatment consists in rest, appropriate diet, and opiates when indicated.

3. For specific treatment, irrigations with solutions of various parasitocidal agents have proved unsatisfactory.

4. The great superiority of the bismuth treatment over irrigations or even over treatment merely by rest and diet has not been proved. Eradication of infection has not been discussed in the reports of the bismuth treatment.

5. Ipecac treatment has given satisfactory results in our hands. In a series of 21 patients with dysentery the amebic infection has been eradicated in 12 that were followed, with frequent examinations of stools, for from one to fifteen months. The infection was apparently eradicated in 8 others followed less than one month. In only one instance of amebiasis with

13. Herrick, W. W.: *Arch. Int. Med.*, 1910, vi.

dysentery have we failed to get rid of the amebas with ipecac treatment. Failure occurred in four cases of amebiasis without dysentery, but in these the treatment was not satisfactorily carried out.

6. Two cases indicate that, where ipecac fails to eradicate the infection when given by mouth, success may attend its administration per rectum or through the appendix after appendicostomy.

CASE REPORTS.

Two cases of the last ten of the ipecac-treated series seem to be of sufficient interest to merit a report in detail:

Case 1.—*Amebic dysentery; three relapses; failure of ipecac when given by mouth; appendicostomy; ipecac given in starch suspension through appendix; rapid recovery with permanent eradication of infection.*

FIRST ADMISSION.—Charles Simpson, No. 23,712, colored, male, Jamaican, age 26; on the Ithsmus two weeks; admitted May 9, 1910; discharged May 20. The patient gave a history of diarrhea, abdominal pains, tenesmus, and blood in his stools. An examination of his stool showed an enormous number of amebas, epithelial cells, and mucus.

TREATMENT.—Rest, milk diet, ipecac, bismuth, saline enemas. Four doses of ipecac were given in capsules, grains 45, 40, 35, and 30, and each dose was preceded one half hour by laudanum M xx. After this treatment bismuth 5i four times daily for four days was given. A stool examination two days after ipecac was discontinued was negative for amebas.

SECOND ADMISSION.—No. 24,927. Admitted June 22, 1910 (32 days after former discharge); discharged July 8, 1910. History of dysentery for four days with bloody stools. One stool examination showed pus but no amebas. (We do not feel, however, that this examination was reliable, as it was a routine examination made by an inexperienced physician.) The patient was treated with bismuth subnitrate 5i three times daily for thirteen days. Discharged well.

THIRD ADMISSION.—No. 26,861. Admitted August 23, 1910 (45 days after last discharge); discharged September 26, 1910. History of pain in abdomen and loose bowels for one

week. Stool examination showed numerous amebas, pus and blood.

TREATMENT.—Nine doses of ipecac (one daily) in salol coated capsules, doses decreased gradually from 80 to 10 grains; first dose given August 24, last dose September 1. The patient suffered no nausea or vomiting and no ipecac capsules were passed in the stools. Examination of stool August 25, amebas plentiful; August 26, no amebas could be found. Examinations were then negative for amebas on August 27, 28, 29, 30, 31, September 1 and 22. Discharged well.

FOURTH ADMISSION.—No. 27,913. Admitted October 16, 1910 (20 days after last discharge); discharged March 24, 1911. History of illness of 10 days, abdominal pains, with diarrhea and bloody stools. Examination of stools showed numerous amebas, mucus, pus and blood. For twenty-five days ipecac was given, one dose daily, in salol coated capsules, the dose varying from 80 to 30 grains. Ipecac suspended in starch water was then given per rectum. The starch-ipecac suspension was washed in with about 300 c. c. of normal salt solution. Two enemas were given, the quantity of ipecac in each being 60 and 105 grains, respectively. Several similar enemas containing 15 c. c. of the fluid extract of ipecac were given. One treatment with 60 grains of finely powdered thymol mixed with milk sugar was given. The thymol was divided into three twenty grain doses and given at one hour intervals. It was hurried through the small intestines into the colon by following it with magnesium sulphate. Besides all the above treatment, irrigations of normal salt solutions were frequently given.

The treatment occupied eight weeks. The patient had practically no nausea or vomiting at any time, and the ipecac capsules did not pass through with the feces. However, the dysentery did not improve, and the patient became emaciated. Within the first 15 days of treatment there were 12 stool examinations negative for amebas and 5 positive ones. The examinations were then persistently positive for 42 days, the amebas being numerous in each of 22 different examinations. Diarrhea, blood and mucus were almost constantly present.

Our treatment had failed completely and the patient's condition was critical. We decided, therefore, that surgical interference was indicated. Dr. Lloyd Noland, Chief of Surgical Clinic, did an appendicostomy on December 12, 1910, and kindly returned the patient to us for post operative treatment. The patient made a good recovery from the operation. Three days afterward, on December 15, his colon was irrigated through the appendix with normal salt solution. Numerous blood stained sloughs of tissue were washed out, and these contained large numbers of amebas. Ipecac, 45 grains, in 100 cc. starch suspension was introduced on the 15th. Ipecac was given in the same way on December 16, 17, 18, 19, 20, and 21, the doses in grains being 75, 75, 60, 50, 60, 60. Seven doses altogether were given. The dysentery quickly cleared up and the patient rapidly improved. Irrigations of salt solution through the appendix were continued for only 18 days after operation, when no further treatment was administered. The stool examination was negative for amebas on December 18, after the third dose of ipecac, and examinations were negative thereafter on December 19, 20, and 31, 1910, and January 11, 14, 16, 18, 26, March 19, 23, 24, April 24, 1911. The last examination was made more than four months after the last dose of ipecac. The patient was held in the hospital for a long while for observation and was given a position as orderly in the hospital. He has had no further intestinal disturbance and his stools are formed and otherwise normal. He is now a healthy, robust man.

DISCUSSION OF CASE.—Amebas decreased in numbers and were absent on 12 out of 17 examinations during the first 15 days of ipecac treatment. They then became numerous and were found on every examination during the last ten days, when even larger doses of ipecac were being given. The subsequent history after appendicostomy shows that the amebas had not established a tolerance for ipecac, and that the ipecac used had not deteriorated. The only plausible explanation of the phenomena is that the patient during his former treatments had established a tolerance for the drug that manifested itself by an ability to destroy or to absorb the amebicidal

agent in the small intestine before it reached the amebas in the colon. The histories of other cases of amebic dysentery leaves no doubt but that the prompt eradication of infection in this case was due, not to the appendicostomy and saline irrigations, but to the ipecac introduced through the appendix.

Case 2.—*Pellagra with recovery; amebic dysentery developed during convalescence; failure of ipecac by mouth to eradicate the infection; eradication of the infection by ipecac administered per rectum.*

Doreas Taylor, No. 28,918, colored, female, age 11 years, born on the Isthmus of Panama; admitted December 22, 1910; discharged April 9, 1911.

The patient had been sick one week. The onset was with fever, headache, abdominal pains and vomiting. She had frequent stools containing mucus and blood. No chills. On admission her temperature was 99 F. and did not rise higher than 99.5. On examination she was found to be stuporous, the pulse was rapid and quite irregular; there was a sooty, blotchy pigmentation of the face on the forehead, cheeks and about the nose and lips; also on the neck and upper thorax. The skin of the hands and elbow was normal, excepting a slight papillary hypertrophy over the knuckles. On the dorsum of the right foot was a wrinkled parchment-like area of skin, thinner than normal and showing some atrophy of pigment. This covered the toes and extended half way up to the ankle. The tongue on admission was thickly coated on top and showed raw, denuded margins, and the gums and buccal mucosa were red and inflamed with patches of grayish exudate. The heart was not enlarged, and there were no murmurs, but arrhythmia was present. Numerous moist rales were heard throughout the lungs. The spleen was palpable. Leucocytes 12,500. There were one to three stools daily for four weeks, and these contained mucus, blood and amebas. Urotropin, 10 to 20 grains, three times daily, was given. The coating on the tongue cleaned off and the whole lining of the mouth assumed a scarlet, bald appearance. There was present a marked vaginitis, and the vaginal mucosa had the same scarlet color. The mental condition gradually cleared

up, the pulse became slower and regular, the skin of the face and trunk lost its sooty pigmentation, and the mucosa of the mouth and vagina became normal.

On January 17, 1911, after the pellagrous signs had about cleared up, a proctoscopic examination showed a number of very small ulcers, about 1 or 2 mm. in diameter, in the rectum. It was not clear whether these were fresh ulcers or healing ulcers, so it was decided to wait for about two weeks before beginning treatment for amebic dysentery.

On January 31, 1911, a second proctoscopic examination showed that the ulcers had grown to about .5 to 1 cm. in diameter, had undermined margins, and grayish necrotic bases. Before this examination there had been nine stool examinations positive for amebas, mucus and blood.

On February 2 ipecac treatment was begun; seven doses from 40 grains down to 10 grains were given, one dose daily. The number of stools promptly diminished and blood disappeared. An examination showed a few amebas on February 5. Examinations were negative on February 6, 7, 8, 10, 11 and 16; but amebas were plentiful on February 18, eight days after the last dose of ipecac.

Prostoscopic examination on February 14 showed clean ulcers that appeared to be somewhat smaller and seemed to be healing. They bled easily when probed.

On February 20 another course of ipecac was begun. Seven doses of 40 to 5 grains were given on successive days, the last on February 26. Stool examinations were negative on February 23, 24, 27, March 1 and 2; but amebas were again present on March 5, seven days after the last dose of ipecac.

Prostoscopic examination showed a few small ulcers, 1 or 2 mm. in diameter, clean, healthy looking. They bled easily when probed. A few small areas that appeared to be scars were visible.

On March 13 the administration of ipecac per rectum was begun. Nine small starch enemas with 60 grains of ipecac in suspension were given on successive days, the last on March 21. Stool examinations were negative on March 17, 18, 27, April 5 and 6, the last 16 days after ipecac had been discon-

tinued. Protoscopic examination on March 8 showed that the ulcers were entirely healed and covered over by normal mucous membrane.

DISCUSSION.—This was a patient with pellagra whose recovery progressed while amebic ulceration and dysentery developed. The eradication of the infection by ipecac given per rectum indicates that this method should be attempted before one resorts to surgical procedures. The reappearance of amebas in the stools after ipecac treatment by mouth took place eight and seven days respectively after the last dose of the first and second courses of ipecac. The ulcers had healed and there had been no reappearance of amebas sixteen days after the last ipecac enema. The success of the enemas in this case might possibly have been due to the presence of ulcers in the rectum and sigmoid only.

We wish to thank Col. W. C. Gorgas, Chief Sanitary Officer, for permission to publish this paper.

Speech Defects*

Modern Treatment by Vocal and Articulatory Exercises.

By SALLY SPYKER, New Orleans, La.

Dr. Hudson-Makuen, of Philadelphia, whose name is so eminently associated with the subject of defective speech, makes the rather startling statement that "all speech is defective."

This idea is not flattering to our self-love, and when first presented we feel somewhat resentful, if not pugnacious. But listen critically, if you please, to your own speech, to the speech which you hear daily and hourly about you, and, comparing the same with standards of perfection, note its inaccuracies and impurities, and the statement will stand, I believe, unchallenged.

We meet the requirements of ordinary conversation when we render ourselves intelligible to those about us—the ear demands nothing more. Consonants dropped, vowels slurred, whole syllables omitted are trivialities to the average speaker

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in every day life, while the voice may be, as Oliver Wendell Holmes wittily writes:

"Acidulous enough to produce effervescence with alkalies, and strident enough to sing duets with the Katydids."

It is not, however, to speech, defective in these particulars, careless and provincial speech, nor to speech marred by even slight deviations from the normal, that I shall have reference here; but to speech which is glaringly defective—that which is so trammelled as to render the speaker unintelligible; to bar the sufferer communion with his fellows.

In the family of the unfortunate which I have met as a teacher are grouped:

The Cleft-palate patient; the Stammerer; the Deaf Mute; the Child Mute, not because totally deaf, but mute because deaf to speech sounds; the mentally defective child; the child speaking a "language of his own invention."

I say those children and adults whom I have met, have suffered in varying degrees and from one or other of the forms of defective speech just mentioned.

In all of these cases the method employed in the production of voice has been definite and uniform, but apart from this the treatment has been adapted to meet the needs of the individual.

THE CLEFT-PALATE PATIENT.—Defective speech in this case is due to irregular structural development, and is noticeably imperfect both in resonance of voice and distinctness of utterance. The repair effected by the surgeon, the closure of the cleft, I mean, assuming that the operation has been successful in every detail, places the patient where he may more nearly approximate normal speech, but the operation does not always give him command of such speech. And it is here, when the physician may not give his time, engrossed as he is with matters of graver import, questions of life and death, that the teacher does her work.

There is much which may, and much which may not, be done by vocal and articulatory exercises for the cleft-palate patient. He is accustomed to his own speech and is not conscious of its faults. His ear must be trained to recognize the difference between distinct and indistinct utterance, between

nasality and resonance. It must also be remembered that his organ is still an imperfect one, and it must be trained to such activity as it may acquire.

That disagreeable nasality or want of resonance characteristic of this speech, although it may have been greatly softened has never, in my experience, been wholly overcome. I have, however, had patients attain to a degree of precision in articulation such as should bring the red blood into the face of the average speaker, not handicapped, but careless.

I repeat that I have never succeeded in bringing normal resonance to such a patient; nor have I been fortunate enough to teach such a patient during the early developmental speech period.

I have one under my care now, a child two years and three months old. This child when brought to me, if asked to blow a feather, to blow out a candle, to blow at any object whatever, invariably tried to force the breath through the nostrils instead of the proper channel. Every one must recognize the difficulty of reaching the budding intellect of such an atom of humanity, but she is beginning to imitate quite successfully, and now gives a fairly vigorous puff for such a tiny creature. In her case speech is developing so slowly that it has been impossible to do a great deal for her, and after giving her a course of experimental lessons, I have thought best to see her only once a month; but I watch her with the keenest interest and I hope to accomplish satisfactory results.

STAMMERING.—Everyone interested in this subject is familiar with the following statements: “Stammering is a lack of co-ordination; it is a fault of the vocal mechanism; it is a want of promptitude on the initial syllable of words.” And all of these definitions are true. This lack of co-ordination, however, is its physical manifestation.

The stammerer’s convulsive, spasmodic attempts at utterance indicate quite clearly to any one that the machinery of speech is not working harmoniously. But the disturbance originates in the failure of the higher speech-centers—the nervous mechanism or controlling agent—to command “instantaneous and simultaneous response” from the physical or

lower speech centers—the respiratory, the phonatory and the articulatory mechanisms.

Normal speech is involuntary and automatic; the task set for the stammerer is that of acquiring conscious and voluntary control of those muscles employed in its production.

I have seen rare cases where a diagnosis of the trouble, together with an analysis of the elements of speech and a knowledge of phonetic syllabication has served to restore confidence and to relieve the patient almost at once. Other cases, and the majority are such, acquire voluntary control of these mechanisms only after weeks and months of painstaking, diligent practice. The stammerer can always sing, and it is a well known fact that he can read aloud or talk fluently when alone, and I hold that what he can do at certain times he can learn to do at all times.

PARTIAL DEAFNESS—THE DEAF-MUTE.—Impression must precede expression, and in orderly development the child hears, apprehends, and talks. His first impressions of speech reach him through the ear. If this channel is impaired and partial deafness caused thereby his power of expression will be impaired in direct ratio, and if the deafness is total the child will be mute.

I think I may safely say that in no department of education has there been so much controversy as in that concerning the instruction of the deaf. The theories and methods grouped about their education are too numerous to be detailed here, and you are, doubtless, more or less familiar with them all.

Happily, the deaf child to-day is taught language through the eye and the sense of touch, as the more fortunate hearing child is taught through the ear.

The ability of the pupil to enunciate distinctly depends, I should say, largely upon the skill of the teacher; lip-reading, as it is called, or the ability to understand the speech of others, depends greatly upon the quickness and skill of the pupil. But a child who is not totally deaf may also be mute, "because," says Dr. Makuen, "the auditory speech center covers only a part of the general zone of hearing, and there may be deafness for speech sounds, while other sounds are distinctly heard."

I have had such a child under my care during the past three months. He is twelve years of age and has never talked. He is a nervous subject, and, of course, his mentality has been greatly impaired. The first month I worked without any apparent result; during the second month I felt that he was gaining in ever so slight a degree, but he became so excessively nervous that I was unwilling to conduct the case unless the child were placed under the care of a physician. This has been done, and the improvement in his nervous condition is so marked that I have been able to attain results at the end of the third month which are encouraging and satisfactory. I am teaching this child as the deaf child is taught, through the eye and the sense of touch. That he will learn to express himself by means of articulate speech, I feel sure, and the character of his speech, when he acquires it, will be the best index we shall have to the working of his mind. How long the process may be, how far he will free himself from the charge of feeble mentality, I do not know. I hope much; I can predicate little.

One of the most interesting cases I have just now is being treated at the Woman's Dispensary, and was admitted on January 23. This is a child of eleven years of age, who has invented a language of her own. It bears little resemblance to that which she hears spoken about her, but she speaks it very fluently, and reads pages of print in this same unintelligible jargon, comprehending the words, but unable to pronounce them.

This child is in the fourth grade at school, keeps up with her class, and her mother claims that she is strong in arithmetic. She hears well, and does not intend to invent: she recognizes the fact that she has done so quickly when her attention is called to it, and it gives her evident distress. Her speech is composed almost entirely—in combination with the vowel sounds—of the labial, the labiodental, and the linguodental sounds.

Of the anterior linguo-palatal sounds only one or two are employed by her; and, "H" excepted, there is a conspicuous absence of the posterior linguo-palatal sounds.

She has been greatly handicapped in her classes by her impediment, but she is freeing herself from it rapidly, and seems much pleased with her achievement.

She is undersized, and of a nervous temperament; most speech defectives are. Her mother tells me that she was a fine baby at birth, but that when two weeks old she was seized by an illness which she described as "wasting" and which lasted for a period of two years. At the beginning of the developmental speech period she had a very severe fall, and it is to the nervous shock received at this time, together with her feeble physical condition, that I believe the serious disturbance of the speech impulse to be due.

In closing this very informal paper, I wish to say that I have tried to suggest my subject, not to expound it. To attempt to do this latter to a body of physicians were to display my ignorance, not to prove my knowledge.

Referring to Dr. Makuen again, "defective speech is not a disease, but a symptom." The teacher is not equipped to diagnose and treat disease, and the defective speech patient is primarily the physician's patient. Many of these subjects I know are not educable, but many are, and my plea to the physician is, that all may be given the test of vocal and articulatory exercise.

The X-Ray Examination of the Gastro-Intestinal Tract.*

By AMÉDÉE GRANGER, M. D., New Orleans.

I will not attempt to review even briefly the literature on this important subject, as that would consume too much time, but will call your attention to the valuable assistance which this method of diagnosis can render to you in this class of cases. Of the two methods of radiology explorations, the examination with the screen and the skiagraph, the former is the method of choice. The fluoroscope will give diagnostic information beyond the radiograph, in that changes in position and the movements of the viscera can be studied. Dr. Guido Holzknecht, Privat Docent for Medical Radiology and Direc-

* Read before the Orleans Parish Medical Society, April 10, 1911.

tor of the Institute for Radiology, Diagnosis and Treatment at the Royal and Imperial General Hospital, Vienna, writes in a recent article:

“The thorough use of the fluoroscope has given superior results in this work (gastro-intestinal examination), and I might add that the photographic technic is only an occasional supplement—although a very important one—to the fluoroscopic method of examination. The fluoroscope reproduces the living, while the radiograph records accidental or improvised phases of fluoroscopy.”

Fluoroscopy, however, without modern apparatus, will prove a great disappointment and without adequate means of protection would be dangerous to the operator.

APPARATUS.—The X-Ray room in which the examination is conducted must be capable of being made absolutely dark. The necessary switches for the light in the room and for the control of the current passing through the generator or coil and the X-Ray tube, must be placed within easy reach of the operator. The tube itself should be held in an opaque X-Ray-proof container provided with a diaphragm opening. The opaque container will prevent the fluorescence of the air surrounding the tube from interfering with the darkness of the room and the circle of rays which reaches the screen can be controlled by means of the diaphragm opening. The latter, when closed down to a small stop, serves as an indicator of the path of the central ray. The operator should be able to move the tube and its container in any desired direction with ease and without having to change his position or to reach over or beyond the patient. He can then focus the central X-Ray on any part of the field of examination and by the use of the diaphragm the latter can be cut down to a small area, thereby giving better and fuller details. The screen should be at least 16x20 inches and faced with lead glass. A stool with a revolving sheet should be provided for the patient. With such an equipment the examination can be conducted expeditiously and with adequate protection to the patient and operator.

TECHNIC.—The patient is seated on a revolving stool and metal indicators are placed on his skin over the ensiform

cartilage, the umbilicus and the anterior-superior spinous processes, which become important landmarks during the examination. The room is then placed in absolute darkness and the operator remains in the dark for twenty minutes before beginning the examination. This is done to increase the sensitiveness of the retina and to secure ocular accommodation. The screen is next placed against the lower thorax and abdomen. The central ray is made to pass through the umbilicus. This is easily done with my universal X-Ray frame by closing down the diaphragm and altering the position of the tube until the shadow thrown by the metal indicator of the umbilicus lies in the center of the small circle of light thrown upon the screen, and a rapid examination of the whole field is made. The lower thorax is examined, the position of the diaphragm is observed and the gaseous zone beneath it is observed. (The latter is caused by the fundus of the stomach, the splenic flexure of the colon and the transverse colon.) As it is necessary on account of the comparatively equal density of the abdominal contents to render the stomach either more transparent or more opaque in outline, the patient is told to swallow slowly and in small quantities an emulsion of bismuth. During this time the operator notes the manner in which the stomach fills up, its situation, its shape, its direction, its dimensions, its peristaltic movements and the evacuation at the pylorus. Palpation is also done to determine the sensibility, consistence and mobility of the stomach.

The adult stomach presents, in general, the following characteristics, which I will briefly summarize:

Before the ingestion of the bismuth emulsion, the fundus alone is visible, and then only when it contains gas, in the form of a light zone under the diaphragm on the left side. This represents the air chamber. After the ingestion of a small quantity of the bismuth emulsion, the stomach appears in the form of a vertical tube, surmounted above by the light zone of the air chamber and terminating below by a short horizontal segment, which corresponds to the pyloric portion. The stomach is contained in the left hypochondrium; its light border is usually at a good distance from the median line,

which it does not reach, even after the ingestion of large quantities of the bismuth emulsion. The horizontal or pyloric portion may reach or go beyond the median line. Its inferior border is usually situated in the neighborhood of the umbilicus and, as a rule, above it. Exceptionally a normal stomach of the oblique type is seen. Experience teaches that more dependence must be placed upon the data obtained from observing the manner into which the stomach fills up, the contractions at the pylorus and the state of sensibility than upon its size and situation. Numerous cases presenting no gastric symptoms have stomachs abnormal in size and position, while on the other hand others presenting severe gastric disturbances show no such abnormalities.

The manner in which the normal stomach fills up is characteristic. Its cavity adapts itself exactly to the volume of its contents, so that it gives the appearance of being always full, with the air chamber above, no matter what the quantity ingested be. When the latter is increased, the transverse dimensions of the stomach increase in proportion, the level of the liquid remaining about constant, so long as the volume of gastric contents remains under 300 c. c. The inferior limit of the stomach remains practically stationary. This manner of filling up denotes an unimpaired tone of the walls of the stomach. In normal cases, the peristaltic waves of contraction are limited to the horizontal or pyloric portion of the stomach. By means of palpation during the fluoroscopic examination, it becomes possible to locate with precision the site of a pain complained of by the patient. Without the fluoroscope, this localization is at best vague and often erroneous. With it, and because of the fact that the palpating hand can be watched by the operator, this localization becomes exact and not infrequently errors of diagnosis are discovered. For example, a pain thought to be due to appendiceal trouble was demonstrated to be a pain of the pylorus, which was displaced and prolapsed, lying near McBurney's point. By this means also we are able to distinguish between a visceral pain and an extra gastric pain. The visceral pain, which always denotes the presence of organic disease of the stomach, is located at

some fixed point of the stomach wall and consequently away from the median line. The extra gastric pains, on the contrary, are usually located along the median line and bear no relation to the size or position of the stomach. This has a very great clinical importance, as it enables us to distinguish between the pain due to functional disturbances and that due to organic disease of the stomach.

DILATATION.—To establish the diagnosis of atony and dilatation, it is indispensable to study carefully the manner in which the stomach fills up during the ingestion of the bismuth emulsion. I have already described the characteristic manner in which the normal stomach does this. The dilated stomach fills up like a bag, with inert and flaccid walls. The emulsion accumulates at the bottom, distends passively the coating which it occupies, its level rising in proportion to the quantity of emulsion ingested. The walls of the stomach come in contact between the portion filled with fluid below and the air chamber above, simulating an hour-glass contraction. This manner of filling up denotes atony, whether or not there is an increase in size of the stomach and whether or not its lower limit lies above or below the umbilicus.

PTOSIS.—This condition may exist without atony or dilatation and may cause no symptoms. The diagnosis is easily made by studying the relation of the stomach to the marked anatomical landmarks.

CANCER.—The vertical or cardiac portion of the stomach is clearly outlined, but the horizontal or pyloric portion is shortened or altogether absent. When there is no complete obstruction at the pylorus, the bismuth emulsion slowly escapes from the stomach. The peristalsis is no longer limited to the horizontal or pyloric end of the stomach, but now extends along the greater and lesser curvatures. Six hours after the ingestion of the bismuth emulsion, some of it can still be seen in the stomach.

ULCER.—The presence of visceral tenderness located at a fixed point of the stomach walls, the increase in peristaltic contractions and the presence of a dark shadow in the left hypochondrium six hours after the first examination, when

only the clear shadow of the air-chamber of the stomach should be visible, would be strongly suggestive of the presence of ulcer.

AEROPHAGIA.—This troublesome condition, in its mild form, can only be diagnosed by means of the X-Ray. Its symptomatology is so varied that it has been the cause of numerous errors in diagnosis. Many patients suffering with aerophagia have been variously treated for arterio-sclerosis, pyloric stenosis and various neuropathies without result, when a prompt cure would have followed the appropriate treatment of the symptom aerophagia.

The diagnosis is easily made with the fluoroscope when any of the following characteristic appearances are seen:

- 1st. Increase in the volume of the air-chamber.
- 2d. Much higher position of the diaphragm of the left side.
- 3d. Unusual transparency of the whole abdomen.
- 4th. The inferior border of the liver becomes visible.
- 5th. Occasionally, the shadow of the apex of the heart is seen below that of the diaphragm.

CHOREA.—Drs. Leven and Barrett (of Paris) have given this name to a heretofore undescribed disease of the stomach, which cannot be diagnosed without fluoroscope. It is characterized by spasmodic contractions of the stomach walls, especially at its pyloric and cardiac ends, presenting a fluoroscopic shadow not seen in any other stomach affections. The stomach assumes a great variety of shapes and positions during the examination. At times its contents are emptied in a few minutes; at others, the spasmodic contractions at the pylorus cause delayed evacuation. This extreme irritability of the stomach is responsible for a train of local and general symptoms, which has led to many errors in diagnosis and has proved most unyielding to medication.

ENTEROPTOSIS.—I make a second fluoroscopic exploration not sooner than six hours after the first in all my cases, to determine the presence or absence of bismuth in the stomach, and invariably I have been able to satisfactorily study the colon, the bismuth having reached it by that time. Were this not the case, I would wait until the next day to make a further

exploration after injecting some bismuth solution in the colon. This for the same reason that bismuth is ingested to make the exploration of the stomach possible. To avoid errors in the estimation of the distance of the transverse colon above or below the umbilicus, it is necessary that the central X-Ray strike the fluorescent screen perpendicularly at the point corresponding to the umbilicus. The hepatic and splenic flexures of the colon may appear sharply angled, with possible kinks. This is usually faulty interpretation, as what happens to be an angle is really a curve, the upper portion of the ascending colon being overshadowed by the distal of the transverse. If there be a kink that obstructs, there is a damming back of the opaque emulsion on the side from which the emulsion was introduced.

In the study of the particular portion of the colon it is desirable to diaphragm down to that area on the screen. The fluoroscope diagnostic information is beyond the radiograph, in that changes in positions of the colon, due to peristaltic movements, to manipulation and to adhesion, can be studied.

Indications and Contra-indications to Curettage.*

By J. C. HARDY, M. D., Lecompte, La.

The subject I am sure is one that could be handled in a more worthy manner by anyone of you. However, if the paper will only serve to bring up a discussion I am sure it will have served a useful purpose.

Curettage: An operation capable of much good, but a great deal more harm, the curette being an instrument whose abuse is proverbial. But as with a great many other useful procedures in medicine and surgery, the enthusiast has had his day, so to speak, and we are now beginning to realize that the operation practiced conservatively has its distinct field of usefulness, with well defined rules for its use and dangers of abuse. It is my intention to speak of these as indications and contraindications, and permit me here to state that the latter are of far more importance to know than the former, for a

* Read before the Rapides Parish Medical Society, May 1, 1911.

curette improperly handled can produce irretrievable damage and even death.

Were it within the scope of my subject or time I would like to take up the histo-physiology of the uterus, for, in order to do the operation of curettage intelligently, we must know the normal structure before we attempt to correct the abnormal. For my purposes it suffices to state that it is a muscular organ, very vascular and highly innervated, containing a goodly quantity of lymphatic tissue and glands.

Now, to consider the indications for the operation. These I am going to mention under several headings, and will then discuss them separately. (1) After abortion or labor, when symptoms indicate retention in cavity of clots, portions of placenta, etc. (2) In chronic or acute endometritis, metritis or endocervicitis. (3) In all operations on cervix. (4) In cases where abdomen is opened to treat appendages or to maintain a uterus in correct position. (5) To secure material for microscopic examination. (6) In hemorrhages from sub-mucous fibroids or polypi (only when small and otherwise indicated). (7) Subinvolution.

To consider in more detail: Under (1) we have abortion or labor and retained membranes or clots. In this the operation should be done as soon as the diagnosis is made, especial care being taken to exercise an aseptic technic, owing to susceptibility of organ to infection at this time. (2) Endometritis, metritis, etc. Only when such conditions are primary, probably rare, unless it is our intention at the same time to remove the cause. It is especially indicated for the control of hemorrhage in same and may require several repetitions to effect a cure. If such cases are gonorrheal in origin the curetting should be deep in order to get to the glands. (3) Operations on cervix, in condition requiring same—for example, laceration—the mucosa is, as a rule, secondarily affected and for this reason should be curetted. (4) In displacements of uterus preliminary to celiotomy. In these cases the false position of the organ as a rule, by interfering with the circulation, etc., produces a hypertrophy or atrophy, but unless such has occurred the operation should not be done. (5) To secure

material for microscopic examination. The necessity for this is at once apparent and should be done in all suspicious cases of carcinoma, tuberculosis, etc., in which diagnosis cannot be made by other means. (6) Hemorrhages from submucous fibroids or polypi. Kelly states that in this condition the relief of hemorrhage is marked and that by several repetitions a cure of the cause sometimes results. (7) Subinvolution. By the counter-irritation serves to stimulate the organ to a more rapid return to normal, unless it be complicated by a condition requiring a more extensive interference. Other conditions that may require curettage are membranous dysmenorrhea, a rather unusual condition. Rarely may be of benefit in sterility in which other possible causes have been eliminated, the husband for instance. In such successful cases the dilatation is probably the beneficial procedure. In inoperable cancer as preliminary to use of paste or to remove as much of exuberant growth as possible. As a finale, though to my mind the main indication of a curettage, is an accurate diagnosis, and then to curette only for those cases or conditions we can hope to benefit.

Contraindications. These are numerous and, to repeat, are probably of more importance than the indications. They may be given as follows: (1) Malignant disease. It being indicated only in those cases where tissue is gotten for diagnosis, as preliminary to paste or to remove exuberant and foul masses. Dangers: hemorrhage, sepsis and opening of lymph channels, causing metastasis. (2) Where there is slightest suspicion of pregnancy. Often such persons will insist on the operation and the physician will only realize his mistake too late. (3) Every case of inflammation in which the infection has extended to the tubes, ovaries, pelvic peritoneum or cellular tissue, unless it is to be followed by laparotomy for the correction of same. Or in case the latter is refused it may be used to ameliorate some of the symptoms temporarily. (4) Ectopic gestation. Danger: Perforation and sepsis and no chance of proving beneficial.

Here I wish to state that, as a rule, I do not think that the operation is complete unless followed for a month or more by

the douche tampon treatment. We find that with the latter 10 per cent ichthyol in glycerin has a very beneficial influence.

In closing, I hope that in my enthusiasm I have not infringed on anyone else's paper, and if I have I beg an humble pardon, for my only idea has been to jolt (slightly) your memories and not to state anything new.

Louisiana State Medical Society Proceedings.

EDITED BY PUBLICATION COMMITTEE,

DR. JOSEPH D. MARTIN, Chairman, 141 Elk Place, New Orleans, La.

History of Medicine in America.

By E. J. GRANER, M. D.

President's Address, Delivered at the Thirty-second Annual Meeting of the Louisiana State Medical Society, held at Shreveport, May 30-June 1, 1911.

I fully appreciate the honor of addressing you this evening as President of the Louisiana State Medical Society.

It is my desire to narrate to you in a fitting way the history of medical education in America and the triumphs of our great science. We can hardly imagine the hardships encountered by the medical pioneers who first came to America. Our present knowledge of American medicine and its teachings are founded upon investigation and experiment, and thereby using this knowledge in a realization of its true worth to advance with progress in all branches of known science.

About one hundred and twenty years after the first voyage of Columbus along the northern shores of the New World the struggling colonists were working to establish what is now the greatest Republic the world has even known.

We are told that, with the people, came their doctors. History relates that the first medical man to visit our shores was Thomas Wottan. He came as surgeon-general of the London Company in 1607, whose expedition settled at Jamestown. This fact, that he came, is all that we can say regarding this great surgeon.

The early history of American medicine, which played so im-

portant a part amongst the poor struggling immigrants and the sacrifices made by those unselfish men to do good, is lacking in great names and events.

Medical education in America began with the student associated with his preceptor, a practicing physician, before the dawn of medical colleges. This system, we may say, was a revival in the Colonies of such as prevailed in Great Britain. The student was given every opportunity to read, compound medicines, see cases, witness and assist in operations, so as to gain such knowledge that might be to his advantage. The apprentice or student course was for some three to seven years, after which a certificate was issued by the preceptor certifying to his proficiency and ability to practice.

Those students whose ambition was such, and who had the means, went to the famous medical schools of London, Paris, Padua, Edinburgh, Aberdeen, Glasgow, Leyden, and there obtained the training and diploma which they could not receive in the Colonies. These men, returning to their homes to practice medicine, armed, as it were, with modern weapons to fight disease, were made to realize the necessity for regular and systematic medical training, and by them was begun the relentless and everlasting war to uplift our noble profession and the regular doctor.

This birth of medical education has grown from its incipency, a weak child, to a realization which, if its founders could now look upon it, would stagger at its magnitude and greatness, but yet far from complete.

The first special lectures in anatomy were given by Giles Firman in 1647 at Harvard College.

John Lining, a Scotchman, living in South Carolina, was perhaps the earliest American physiologist. His name, as such, was established by a series of experiments in metabolism, the results of which were published in the Transactions of the Royal Society in 1743. Some ten years later he published an interesting description of American yellow fever, the first American account of that disease.

Lionel Chalmers, of Charleston, was noted for his original research and for his writings. In 1776 he published his account of the relation of the weather and diseases in South Carolina.

The history, particularly of medical education, or records appertaining to medical instruction, is almost lacking from Firman's

lectures on anatomy, 1647, to the time when Drs. Bard and Middleton, of New York; Dr. Cadwallader, of Philadelphia, and Dr. William Hunter, of Rhode Island, in 1750, gave their lectures on anatomy.

Anatomy seemed to be the only subject on which up to this time lectures and instructions were given.

In New York City (1750) a body of a criminal, who had been executed, was dissected by Drs. Bard and Middleton, for the instruction of young men in the study of medicine.

We now find upon the return to America of Dr. William Shippen, Jr. (1762), the first lecture on midwifery was given by him in conjunction with his lectures on anatomy.

Dr. Ezekiel Hersey, of Hingham, Mass. (1770), left a bequest of £11,000 to establish a professorship of anatomy.

In 1780, in Boston, Mass., lectures on anatomy were given by Dr. John Warren, who was an active practitioner, and who had seen service as a surgeon in the Continental Army.

In Philadelphia, Drs. Ashton, Witt, Redman and Bond gained reputations as teachers, who gave instructions to young men.

The War of Independence, which necessitated and compelled all men to do service, interfered with the progress of medical education and delayed the several attempts to provide some definite plan to teach the principles of medicine in the Colonies.

We can look back and see the great difficulties under which so important a profession had to work to begin its great task for mankind in the new world. When we consider the distances, modes of travel, with the crude facilities of conveyance from the centers of population, as existed in those days, we can feel for the poor doctor, who practiced and at the same time tried to teach the other fellow. During these trying times we find the names of many men who worked hard to better the condition of the medical profession in America.

Colden, of New York, Shippen and Morgan, of Pennsylvania, Boylston and Mather, of Massachusetts, and Garden, of South Carolina. To these men we must acknowledge the help and assistance which they gave to medical science and its advancement in the early days in America.

The lectures given by Dr. William Shippen, Jr., at Philadelphia, were impressive enough to stimulate the thought and ambition of

those interested in the advancement of medical training to realize the necessity of a college for medical students. The result of these lectures led to the formation of a medical department at the College of Philadelphia.

So, at last, we come to the new era, the happy time when the new world has some semblance of a medical college.

The organization of a medical department was proposed by Dr. John Morgan. Thomas Penn, May 3, 1765, addressed a letter to the trustees of the College of Philadelphia, endorsing Dr. Morgan's plan to establish a medical department. The suggestion was favorably acted upon on Sept. 26, 1765, and announcement was made of the faculty, subject, time of lectures, etc.

The faculty was composed of: William Shippen, Jr., M. D., Professor of Anatomy and Surgery; John Morgan, M. D., Professor of Medicine; Adam Kuhn, M. D. (appointed 1768), Professor *Materia Medica* and Botany; Benjamin Rush, M. D. (appointed 1769), Professor of Chemistry.

At the commencement of 1771 the degrees of Doctors of Medicine were conferred upon Messrs. Elmer, Potts and Way.

The charter of the college was revoked for political reasons in 1779, and given to the University of Pennsylvania. In 1783 the charter of the college was restored. The year 1791 both colleges were united under the title of the University of Pennsylvania, which to-day continues the first medical school in America.

Dr. Samuel Clossy, an Irishman, a graduate of Trinity College, Dublin, lectured on anatomy at King's College, 1763.

The trustees of this college (1767) voted to establish a medical department with the following faculty: Samuel Clossy, M. D., Professor of Anatomy; Peter Middleton, M. D., Professor of Physiology and Pathology; John Jones, M. D., Professor of Surgery; James Smith, M. D., Professor of Chemistry and *Materia Medica*; Samuel Bard, M. D., Professor of Theory and Practice of Physic; John V. B. Tennant, Professor of Midwifery.

At the commencement in 1770 the degree of M. D. was conferred upon Robert Tucker. This was the first instance in America when the degree of M. D. was conferred, and at King's College.

The Medical Department of Harvard University was organized in 1763. Dr. John Warren, its first teacher of anatomy, was instrumental in organizing the department.

The Medical Department of Dartmouth College was organized in 1798 by Dr. Nathan Smith.

University of Maryland, organized.....	1807
Yale, organized.....	1813
Kentucky School of Medicine.....	1817
Medical School of Ohio.....	1819
Medical School of Maine.....	1820
University of Vermont chartered.....	1822
Medical College of South Carolina, organized.....	1823
George Washington University Medical Dept., organized....	1825
Jefferson Medical College, organized.....	1825
University of Virginia Medical Dept., organized.....	1825
University of Georgia, organized.....	1828
Medical Department of Tulane University, organized as Medical College of Louisiana.....	1834

First class graduated.....	1835
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Classes graduated each subsequent years except.....	1863-65
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Incorporated as Medical Department University of Louisiana.	1847
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Became Medical Department of the Tulane University.....	1884
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Other medical schools were organized during these dates, but all with few exceptions are extinct. Along with the organization of medical colleges we find the profession united to form hospitals, libraries and societies.

The Pennsylvania Hospital was founded in 1752; New York Hospital in 1769; First Insane Asylum in America was built at Williamsburg, Va., in 1773. The first medical library was founded at Pennsylvania Hospital, 1762; New York Hospital Library, 1776; Library College of Physicians and Surgeons, 1778; the first State Medical Society was organized by New Jersey, 1765; Massachusetts Medical Society was organized 1781; in 1787, Society of College of Physicians at Philadelphia.

Maryland organized in 1789, followed by Delaware, New Hampshire and South Carolina, all of which organized before the end of the eighteenth century.

In 1760 the first medical journal appeared, entitled "A Journal of the Practice of Medicine and Surgery and Pharmacy in the Military Hospitals of France," which was merely copied from French journals.

The first medical journal in America for the publication of

original medical news, was the *Medical Repository*, edited by Drs. Smith, Miller and Romayne, in New York City, 1797.

Another early medical publication that appeared in Boston was a Brief Guide to the Common People of New England regarding the care of Small Pox and Measles.

In the Pennsylvania Hospital, Philadelphia, the first clinical instruction in this country was given by Dr. Thomas Bond. Dr. Bond was born in Maryland and was the founder of the Pennsylvania Hospital.

While Dr. William Shippen, Jr., was the first public teacher of midwifery in America, we find Dr. Lloyd, of New England, the first practitioner of obstetrics.

The study of practical anatomy during these times was taught under great disadvantages. Public opinion was greatly against dissections, so much so, that the celebrated "doctors' mob" occurred in New York in 1788. Most of the dissections were done in secret, and as early as 1771 we are told that Harvard College carried on and taught anatomy under these conditions.

During these times charlatans and quacks flourished; there was no law to prevent these uneducated and irresponsible men to practice medicine in their own way. This terrible condition of affairs, especially in a new country bordering on civilization, where men fought in the open against every element to survive, especially disease, one can realize the disadvantages under which they lived.

The doctors residing in Virginia, seeing and knowing this condition, made the first attempt to eliminate ignorance, pretense and quackery, as much as possible among those practicing medicine. They petitioned the Assembly of Virginia to pass laws to regulate the practice of medicine. The Legislature, Oct. 21, 1639, passed an act to compel all physicians and surgeons to declare under oath the value of their medicines. This, then, was the first law in America; so to Virginia we must give the credit for the first laws to regulate the practice of medicine. This beginning, we might say, was a feeble attempt, but it was the start of the foundation to erect the building which to this day we are fighting to complete.

It is hardly necessary for me to tell you that a preliminary education during these times was not required, but we see the beginning, again a step forward, when in 1776, the New Jersey Medical Society went on record that no student be taken as an

apprentice by its members unless he had some knowledge of Latin and Greek. This is the earliest history of preliminary requirements in America as regards medicine.

The period of our War of Independence as a nation was also a revolution for the advancement of medicine. There were many brilliant men whose writings and teachings helped to advance the science and medical thought. Many names might be mentioned here, but as this paper is written for the purpose of dealing with medical education, as it existed in those days, it is not my purpose to encroach upon the historical view.

We now find the eighteenth century drawing to a close, New York, Boston, Philadelphia and Charleston, the principal centers of medicine, with their colleges, hospitals and libraries.

The three conspicuous men, Morgan, Shippen and Rush, whose names stand out as prolific teachers and writers of medicine during this most interesting time of our Nation's life, were illustrious representatives of great systems of medicine.

The period commencing with our political revolution until about 1830, and the epoch systems of medicine wrought out by the imaginations of some few of the great leaders of our profession, were often attacked. This epoch believed in drugs and the almost supreme power of our art. It had little or no faith in nature's ability to cure disease.

The influence which governed the opinions of the medical profession during this epoch, and we might say the previous time, was as follows:

The illustrious Boerhaave, with his commanding intellect, began to enunciate his doctrines of disease at Leyden, in 1701. With him all disease was in the fluids of the system. His doctrines held sway in Europe and America until about 1765; Cullen, of Edinburgh, following Hoffman, proclaimed exactly the reverse—viz., that all disease was in the solids, and that spasm of the vessel was the cause of fever.

What Boerhaave prescribed to expel morbid matter, Cullen prescribed to relieve spasm. Both were heroic in their methods of practice. After Cullen came Brown, of the Edinburgh School, and all diseases were either sthenic or asthenic. Darwin followed Brown; with him irritability and sympathy were the factors in disease.

Benjamin Rush, in 1790, our ingenious countryman, proclaimed his own system—viz., that a convulsive motion of the arteries is the proximate cause of all fever, and that there is but one fever, however different the cause may be.

Benjamin Rush was one of the most noteworthy men of our profession during the early period of our history. He had more influence upon medical opinion during his time than any other American. He was regarded by his compeers as the “American Sydenham.” He was born December 24, 1745, on his father’s plantation, fourteen miles from Philadelphia. At the age of twenty-four he was appointed professor of chemistry in the University of Pennsylvania. During the War of the Revolution he resigned his professorship and was made medical director of the Middle Department of the Continental Army, and served with high honor.

He was subsequently member of Congress, and was one of the signers of the Declaration of Independence. In 1789 he resumed his professorship of chemistry, and in October of the same year became professor of the theory and practice of medicine, which office he held until his death in 1813. During all this time he energetically and ably defended his own system of medicine, as he had previously upheld Cullen’s and indulged in the most heroic kind of practice.

He, moreover, left descriptions of yellow fever and many other observations and essays, which are valuable as records of this period and evidences of his intellectual and moral worth. He was, however, essentially a medical system-maker, like his predecessors. He believed fully in violent remedies, and rather scoffed at nature. His scholars spread over some of the Eastern, more of the Middle, Western and Southern States, carrying with them the errors of their great master—errors always necessarily connected with any theory unsupported by solid facts carefully observed and recorded. He thus had a vast influence upon the medical ideas of the country.

To show the feeling of the man, and his appreciation of medical college improvement, as he saw it in his days, I cannot refrain from quoting from a lecture delivered by him at the University of Pennsylvania November 3, 1806. He says: “In entering this room and taking my seat in this chair I have felt unusual emotions. I have been carried back to the year 1762, when the first anatomical

lecture was delivered in this country by Dr. Shippen. It was in the State House, and to an audience composed of the most respectable citizens of Philadelphia. I have been led to review the little class of ten pupils, of which I was one, that attended his first course of lectures upon anatomy, in a small room over his father's office. I have been borne by my memory to the time of a public commencement in the year 1765, when Dr. Morgan delivered a plan for co-operating with Dr. Shippen in establishing a school in which all the other branches of medicine should be taught in this city. My imagination has carried me to the back parlor of Dr. Morgan's house, in which he delivered, to about half a dozen pupils, a course of lectures upon the elements of botany, chemistry and the materia medica. From hence I have traced the progress of our school through successive appointments to professorships and different places of lecturing, to the present day, when we behold a numerous and respectable class of students assembled in a room appropriated to the professors of the institutes and practice of medicine, and of the materia medica, and connected with a new and spacious building, provided with all the convenience necessary for the accommodation of the professors of anatomy, surgery and chemistry. If he could only look to-day, what would his emotions be, in comparison to what they were then; who can answer?"

Dr. Rush's zeal did not prevent his theories relative to the human rights to venesection and the use of calomel, from yielding to the influence exerted by the fascinating system-maker, the eloquent and dogmatic Broussais.

Broussaisism spread widely in America, especially in New York and Philadelphia, and then in the West and South. It had less influence over New England, which had been trained more to observation, and less to theory, under the care of those masters in medicine, Holyoke and the elder Jackson. The influence of the European schools upon the medical training began to give way to a more American idea at the beginning of the nineteenth century. Some few books were written on anatomy, materia medica, and practice of medicine.

That spirit of loyalty, or true Americanism, to improve the independent idea that our country must produce its own doctors, was beginning to exert itself. Such men as Smith in medicine

and Warren in surgery were good examples of the products of the American college.

While the old world for many years held that well-deserved influence, we may observe the medical centers of Philadelphia, New York, Boston, Charleston, Baltimore, New Orleans and others grow steadily, their influence and systems of teaching improving with the advancement as our science developed. They began to teach more exact and scientific methods of study, with minute observations of facts, and subsequently analysis of such facts, without the least regard to preconceived opinions.

The influence of Louis of France, as a medical reformer, and his numerical system, revolutionized the teaching of medicine in America.

It began when Dr. Gerhard, of Boston, and James Jackson, Jr., of Philadelphia, returned to these two cities and began their honorable careers, by teaching the importance of recording facts and their analysis, with natural power of curing disease and skepticism in regard to drugs.

Two other men of great influence at this time were Dr. Jacob Bigelow, who delivered his address on "Self-Limited Diseases" before the Massachusetts Medical Society, 1835, and Elisha Bartlett, who published his essay on Philosophy of Medicine.

We might here mention the names of such men as E. H. Smith, P. S. Physick, J. R. Cox, Nathaniel Chapman, John Eberle, J. W. Francis, G. B. Woods, Franklin Bache, R. Dunglison, Horner, Draper, Alonza Clark, Dewees, Meigs, Sayre and many others who were teachers and writers in the early days.

The advancement of medical education in America and the results achieved by some of the great men are remarkable, especially when we consider the adverse conditions under which they labored.

A new country with freedom of thought and action gave to the world that immortal McDowell from the backwoods of Kentucky. His work in performing the first ovariectomy, and thereby lifting a curse from women, whose deliverance was thought to be found only in the grave.

Morton, Long, Wells and Jackson gave us the general anesthesia which changed the operating tables into the sufferer's bed of peace.

J. Marion Sims, the father of American gynecology, made possible by his operation the cure of vesico-vaginal fistula.

Lewis A. Sayre, by his method of treating Pott's disease, etc., by the application of the plaster of Paris bandage or jacket, brought salvation to countless suffering children.

We must mention Oliver Wendell Holmes' influence upon the practice of midwifery, his testimony in regard to puerperal fever, and the theory as regards contagion as advanced by him, which was demonstrated practically and clinically by Henry J. Garrigues.

Willard Parker's name will always be associated with the history of the operative treatment of appendicitis, and also McBurney, whose muscle-splitting incision in the operation of appendicitis, demonstrated the feasibility of operating without destroying the muscular continuity of the abdominal wall.

So we could go on, and on, telling you of great things done by American doctors, who were born and educated in this great country of freedom.

Before closing this chapter, let us not forget Reed, Carroll and Lazear. These men demonstrated, and especially to the people of the Southern States, the feasibility of eradicating that terrible curse, yellow fever. The world knows what they did, and as time goes on their memory and achievement will stand out as a guide to others to work and eliminate many of the diseases that carry off thousands of useful lives every year.

With the beginning of the nineteenth century numerous medical schools were organized. The rapid growth of the country was accompanied by an enormous demand for physicians from the cities and towns which sprang into existence.

Most of the medical schools developed independently of any university and were owned and controlled by small groups of medical men, who, in many instances, conducted the schools as business enterprises for what money and reputation they could make out of them, and for a time teaching of medicine was a profitable business.

It must not be supposed, however, that these schools were necessarily all bad; many were controlled by men of high ideals, by men who became great teachers and left an impress on the medicine of their days.

But the principle of conducting medical schools as commercial

enterprises was, of course, wrong and indefensible, because it led to competition for students and resulted in the reduction of fees and the time of study, in accepting of men without preliminary education and in the graduation of unfit men. The result has been that in the United States to-day we have more medical men per capita and more medical schools than any other country in the world.

When the medical profession in America instituted the American Medical Association in 1847, the betterment of medical education began. The intermingling of men from all quarters of the Union at its annual meetings where the interchanging of thoughts and opinions was freely exercised, led to the formation and appointment of committees to investigate the standards of the medical schools, etc.

But the wave of settlement and civilization finally spread until there is no longer a frontier. Again, the supply of physicians far exceeds the demand. From the standpoint of demand, therefore, the excuse for low standards of medical education and of medical colleges operated for profit no longer exists. The known facts of medicine thirty years ago might have been taught in two years' course of didactic lectures by a few men. To-day the known facts of medicine, which must be mastered before a student becomes a qualified practitioner, require much more time, require a thorough preliminary preparation, and a thorough laboratory and hospital training.

The solution of many of the problems of medical education rests in the hands of the State licensing boards, and doubtless will be solved by them if they are given a fair chance.

In many of the States, however, the medical boards are seriously handicapped. In the first place, as a rule, the board is too closely connected with politics, and in some States the members are appointed largely for political reasons.

It is of the most vital importance that political influence be eliminated in appointing these boards. Our State places the responsibility upon the Louisiana State Medical Society for the personnel of the Louisiana State Board of Medical Examiners, and we must see and know that the men we recommend are capable and firm enough to guard the portal which one must enter to practice medicine in our State. Not only should there be but one

board in each State, but there should be a single educational standard fixed with which every applicant for a license to treat the sick, by whatever means or method, should apply. Let there be one portal of entry to the practice of medicine.

Individuals who are to treat human ailments are alike in two respects: In the first place, they must make diagnosis in order to recognize what they are endeavoring to treat, and, secondly, what they may fail to do in certain cases, even as much possibly as the things they do, may mean the life or death of the patient. For these reasons every one who is to treat human ailments, regardless of the particular methods employed, should be required to have a thorough training in the fundamental branches of the medical course. The objections to medical sects, therefore, are not so much because they are sects as it is that their followers enter the medical profession with a smaller amount of preliminary and medical training than do regular physicians.

The time has certainly arrived when, in this country of great wealth, great intelligence and wide opportunity to acquire an education, the medical profession and the public school unite to demand a reasonably thorough training of its medical men.

American medicine and American medical education have been advancing in the last twenty-five years by leaps and bounds, and we can look forward to the future confident that in the coming great development of modern medicine our country will contribute fully its part.

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Proceedings American Society of Tropical Medicine.

NEW ORLEANS MEETING, MAY 18-19, 1911.

President's Address.

By DR. WILLIAM SIDNEY THAYER, of Baltimore.

With the territorial expansion forced upon our country by the events of 1898, the necessity for a more general knowledge of those diseases which prevail in tropical climates became evident, and with the necessity for such knowledge came greatly increased opportunities for study and the obligation that those opportunities should not be neglected. What has been done by American students since this time is known to all.

The noble work of Reed, Lazear, Carroll, Agramonte and Leonard Wood,—I say Leonard Wood, because it was his wisdom and generosity that rendered this work possible; the extraordinary results accomplished by Gorgas in the prophylaxis against yellow fever, malaria and plague at Havana and in the Canal Zone; the successful prophylaxis against the spread of cholera, plague and beri-beri in the Philippines—these are accomplishments to which we point with just pride.

With a recognition of the work which was to be done, and of the advantages to be gained by bringing together students in this especial field of medicine, and by encouraging the study of tropical disease at home and abroad, a small group of men in Philadelphia, seven years ago, conceived the idea of founding a Society of Tropical Medicine.

The object of this society, as set forth in the Constitution, was "to advance the knowledge of tropical diseases by encouraging original research by its members and others; collecting and recording facts ascertained by such researchers, and disseminating information thereof by discussion among its members, and by the publication of papers read before the society."

Conceived at first as a purely local organization, the founders

* Delivered at the Eighth Annual Meeting of the American Society of Tropical Medicine, New Orleans, May 18 and 19, 1911.

soon realized that its functions were properly national, and so it has become a truly national society.

In the eight years past there have been held seven meetings at which papers of interest and value have been read and many excellent discussions have been held. The society might, however, take a more active part in the discussion of matters of immediate public importance, and it should occupy a more prominent position among the special medical societies of this country. It should, for instance, be one of the constituents of the Congress of American Physicians and Surgeons. This should and does bring before us the question of what the proper functions of this organization should be, as to whether there may not be public or other duties which we might fulfill to the more general advantage of all, as to whether our Constitution and conditions of membership are such as best to further those interests for the benefit of which this society was founded.

The first function of such a society as this should be, it would seem, to gather together at its meetings those men who are doing active work in the study of the pathology, prophylaxis and therapy of those diseases which occur, or may occur, in our tropical possessions, and in the Southern part of our country, and are, or may become, a menace to the health of our people abroad and at home.

In addition to these active workers in tropical disease, it would be well that this organization should include others whose positions may prevent them from becoming immediate contributors to our knowledge on this subject, but whose attainments or interests are such that their opinion and counsel might contribute to progress in this branch of study.

The second important function of a society of tropical medicine should be its public and educational influence. This association ought to bring before the public, medical and lay, those prophylactic measures against the spread of various grave epidemic diseases with which we are constantly menaced. Our voice should actively be raised, not only in warning, but in the proposition and explanation before the American Medical Association, and through this before State, county and municipal authorities, of practical protective measures.

The first question which we might profitably consider relates, it seems to your president, to the matter of membership. There

are at present upwards of one hundred and twenty-five members of the Society of Tropical Medicine. The membership is limited to two hundred. This is a large society, but no larger, it seems to me, than is justified by the nature of the organization.

The qualifications for membership have, in the past, been few—little beyond an interest in tropical medicine and a good general standing in the profession.

Many of our members and officers have been men who, while manifesting a deep interest in the objects of the society, have yet contributed little to the subject themselves. Your present president regrets that for some years his contributions to this branch of medical study has been exceedingly small. He is inclined to believe, nay, he is sure, that some of those who have done most valuable work on subjects pertaining to tropical medicine, whose co-operation we need most urgently, have tended to hold aloof from this association because they felt that it was rather a local society composed of members from the Eastern cities, than a representative national organization, and I must say, from their standpoint, that of one looking on from without, and ignorant of the truly disinterested motives of those who founded this body—from this standpoint, I say—there has been some justification for such a sentiment.

They know, for instance, that the requirements for admission to many, indeed *most* of the special bodies are such that only those who have devoted themselves to the study of the problems which occupy the body, and have published original contributions of real value, are eligible for membership; they know that, even then, the special qualifications of each individual proposed are carefully considered by the council before his name is presented to the society. This results in the practical limitation of membership to such men as are truly active students.

Again, in some associations, in order that the limited membership may not be overburdened by non-productive associates, rules are made which permit:

1. The placing upon the honorary list of those whose membership has lasted for more than a certain number of years; and
2. The dropping from the list of membership of such persons as shall have been absent, from, say, three consecutive meetings of the society without proper excuse, or who shall have failed to

produce a piece of medical research within a given period of years.

Is it true that some such measures are necessary and essential for the preservation of an active special society? Are there not advantages in having the society open to all? Look, for instance, at that which is accomplished yearly in the various sections of the American Medical Association. Is this work not, after all, as good as that accomplished by any of the special societies? What, then, is the field for a special society? This is a problem which might well admit of discussion, were it a question of founding a new society. What admirable work is done in the special sections of the American Medical Association is known to all. But this is not a new society, and the remarkable quality of the paper and discussions at the meetings of the American Medical Association have not been regarded as a sufficient reason for the abolition of other special societies, such, for instance, as the American Neurological Society, the Association of American Physicians, the American Surgical Association or the American Pediatric Society. These societies bring together annually a limited number of special students. There are advantages, and great advantages, in an organization so large that it may include all who have a real interest in the subject to which its researchers are devoted. The American Medical Association, that true center of all matters medical in this country, represents such an organization, and it is highly probable that the day will come when a special section of the A. M. A. is devoted to the consideration of tropical diseases. But along with the work which we do in the American Medical Association, many of us find valuable opportunities for effort in the various special societies, where the active workers in each field are brought together in a quiet way, and freed from the distractions of a large assembly. I believe that there are duties which a special society of limited membership is peculiarly fitted to undertake. Some of these functions, which are distinctly of a public nature, I shall touch upon later:

1. The council, considering these questions at its annual meeting, concluded that in the future they would present to the society as candidates for membership, only such individual as have published original work of real value in the field of tropical medicine, or who, through some special attainments or position, are peculiarly fitted to give valuable counsel to the organization.

2. That every applicant for membership shall be proposed by two members, neither of whom are officers of the Society; each of these proposers shall write personal letters to the council setting forth the special qualifications of the individual proposed. With this proposal there shall be submitted to the council a full list of the contributions of the individual whose name is suggested, upon subjects allied to tropical medicine, with full titles and references to the year, volume and page of the publication in which they have appeared, together with reprints of each article whenever possible. All proposals for membership shall be made at the annual meeting. So soon as possible after the annual meeting a complete list of those nominated for membership will be sent to each member of the society.

3. That a stated meeting of the council shall be held on the evening before the annual meeting of the society. At this meeting the names and qualifications of those individuals proposed for membership shall be discussed and a selection made of those which shall be submitted to the society. At the same time, the names of nominees for the various offices in the society shall be prepared.

A grave difficulty in connection with the selection of the officers for this society lies in the fact that many of the most valuable members are stationed at distant points, and are, therefore, unable to attend meetings of the council. The majority of members of the Association of American Physicians, for instance, come from large centers of the East and Middle West, and can easily be brought together. Some of these difficulties might be remedied by fixing the annual meeting at a time when it may be especially easy to bring the members together. Such a date would seem to be the day before the meeting of the American Medical Association, excepting, perhaps, on those dates when we may hope to gather with the Congress of American Physicians and Surgeons. If, in the future, a special section on tropical medicine should be organized in the American Medical Association, we may then arrange our meetings at some other time.

Your president believes that by the adoption of these or similar measures the society may be made homogeneous, more representative and more useful.

The second great end which our organization ought to serve is a more definite public function. A body such as this association should be particularly fitted to educate and advise on matters of

public health in its relation to those special conditions in the study of which we are engaged. And what need there is for just such advice! In the few months which remain, I would, as examples, suggest but two problems with regard to which this body might render real public service:

1. The first is the old but ever new question of the prophylaxis against malarial fever. When we look at what has been done in Italy, Suez, India, and many points in Africa and in Panama, and then turn to the article of Dr. Howard in Ross's recent book upon the prophylaxis of malaria, we may well hide our heads for shame. There has been scarcely a single public measure taken in the most malarious districts of America to save the hundreds of lives which are being sacrificed yearly. We sit with folded hands and wait for some one else to take the initiative. Why should we not as a body appoint a committee to make a complete report as to those measures which might be most practical and easy of adoption in different parts of this country?—a report which might set the matter clearly before government, city, county and town officials. Such a report, setting forth definite advice as to measures which should be taken, with estimates as to the expenses and means, might be presented to the American Medical Association, and to its constituent branches, might be published in the newspapers, and might well bring about action in many regions. It would certainly help in the education of the public and in the saving of human lives. The committee should be small, consisting of no more than three members, all of whom should have had practical experience in the study and application of prophylactic measures against malaria.

Perhaps in this way we may help to save some of the many lives lost yearly, and the vast sums of money which are needlessly thrown away, largely through the lack of knowledge of our people.

There is another question which we as a people ought to have very much in mind at the present time. I refer to the question as to what measures should be taken against the possible entrance and spread of bubonic plague. There are many reasons to fear that at any time this scourge which, at the present moment, is peculiarly widespread, might appear amongst us on the Southern or Eastern coast. What an easy foothold plague might gain in some of our old, rat-infested cities is not hard to imagine. What was accomplished in San Francisco and on the Pacific coast largely

under the lead of one of our members who is with us to-day, is well known to all. But when one thinks of the difficulties under which he and his associates worked at first—of the extremities to which private interest, blinding the eyes of those in power, lead a misguided public in a community so wideawake and progressive as San Francisco, one trembles to think what might happen under similar circumstances elsewhere. Ought we not, as a society, to endeavor to impress upon the public the dangers to which we are exposed and the measures of protection which we ought to take?

I had hoped to be able to announce the appointment of a committee to report next year, if possible, upon the subject of bubonic plague, but various unavoidable events have unfortunately delayed arrangements. I hope most sincerely that some such body may later be constituted.

There is another matter of public importance which I would lay before the society. In 1915 the Panama Canal, the construction of which was rendered possible by the work directed by our distinguished member and late president, Col. Gorgas, will formally be opened. At a recent meeting of the Medical and Chirurgical Faculty of Maryland a resolution was passed urging that a Congress of Tropical Medicine be held at the same time to celebrate the triumphs of preventive medicine which have made this great work possible. It would seem to be our special duty to take the initial steps in this matter. The suggestion seems most apt and most fitting, and your president would suggest that negotiations should immediately be undertaken with the authorities in charge of the Panama Exposition to ascertain whether such a Congress might not be made an important part of the official program. In order best to assure the most general and distinguished co-operation, the organization of such a congress should, if possible, be undertaken in connection with the International Society of Tropical Medicine, of which this organization is a member. Nothing could be more fitting than such a gathering on such an occasion.

And now the time has come to enter upon the excellent program which lies before us, but before we begin I would express a word of appreciation to the local committee for the admirable arrangements which have been made for this meeting.

For a number of years it has seemed to some of us that a gathering of this association in New Orleans might be of par-

ticular value. New Orleans, the metropolis of the Midi, as our Gallic friends so happily call the South, is particularly interested in the objects of this society. This city has furnished the country and the world with an inspiring example of what can be done by honesty, alertness, courage and energy in stamping out a terrible epidemic; and in the programme in which your local committee has so generously prepared for us, there is ample promise that the members of this society will not regret that New Orleans was chosen as our meeting place to-day.

But one disappointment mars the perfect pleasure of the charming greeting which you have accorded us in New Orleans—and that is that we have as yet heard no announcement of a substantial bequest or donation to Tulane University for the foundation and maintenance of a Department of Tropical Medicine.

No greater service could be rendered to this city, this State, or to our common country, than the fitting endowment of such a chair.

One thing more: The extremely happy inspiration of the Committee of Arrangements in suggesting the invitation of the members of the societies of this and neighboring States to attend this meeting should add greatly to the value of the gathering.

The Society of Tropical Medicine welcomes you, gentlemen, most cordially; you should bring to us knowledge and experience in many of the matters in which we are especially interested; we appreciate your presence and we shall welcome your counsel.

Soyez les bienvenus!

SECRETARY'S REPORT.

During the year that has passed since the last meeting of the American Society of Tropical Medicine the bulk of the work of the Society has been performed by the Secretary by correspondence.

The council met in Baltimore on April 22, 1911, at the invitation of the President, Dr. Thayer, Dr. Guiteras, Dr. McFarland, Dr. Fitcher and the Secretary attended the meeting, at which several important matters were decided upon.

It was voted that the council recommend that the society hold its ninth annual meeting in 1912 on the day before the meeting of the American Medical Association, and in the same city, and that the council meet the night before the meeting of the society.

It was voted that in future all candidates for active membership in the society must submit to the council a list of papers written on subjects bearing upon tropical medicine, furnishing reprints whenever possible, and that the proposers should send letters to the council setting forth the qualifications of the candidate that they recommended.

The council nominated the following officers to be voted upon at this meeting:

President, Dr. Rudolph Matas, New Orleans; Vice Presidents, Dr. Judson Daland, Philadelphia; Dr. Richard P. Strong, Manila; Secretary, Dr. John M. Swan, Watkins, N. Y.; Assistant Secretary, Dr. Allen J. Smith, Philadelphia; Treasurer, Dr. C. Lincoln Furbush, Philadelphia; Councillors (to serve two years), Dr. Ramon Guiteras, New York City, and Dr. C. C. Bass, New Orleans.

Since this action was adopted Dr. Matas has declined positively to be a candidate for the presidency, and the council recommends Dr. Joseph H. White, of New Orleans, for the office.

At the time of the last annual meeting the Secretary referred to his retirement from active work in tropical medicine and volunteered to retire from his office. The council thought it best that he remain the Secretary, and the council took this view of the matter again this year. Last year the society gave the council the power to appoint an Assistant Secretary and Dr. Allen J. Smith, director of the Courses of Tropical Medicine in the University of Pennsylvania, was appointed to that office. In January of this year the property of the society was moved from the Secretary's former office in the Philadelphia Polyclinic to the Assistant Secretary's office in the University of Pennsylvania.

The council recommended that the President appoint a committee of three at this meeting to report upon the available measures for the prophylaxis of plague in the United States at 1912 meeting. The council referred the action on the propositions for membership received since the last annual meeting to the President and the Secretary, with power to act. The Secretary sent letters to those who proposed candidates requesting information about their work in tropical medicine. The President and the Secretary therefore recommend the election to active membership of the following candidates: Dr. Sidney K. Simon, New Orleans; Dr. Milton J. Rosenau, Boston; Dr. John D. Long, United States Public Health and Marine Hospital Service.

The committee appointed in 1909 to consider the advisability of founding a School of Tropical Medicine in the United States has made no report to the council.

The fifth volume of Transactions has been unavoidably delayed, but will soon be in the hands of the members. Members are reminded that, in order to facilitate the publication of the Transactions, the papers would better be sent to the Secretary with the author's preference as to the journal in which they should be published, so that the reprints may be ordered in proper form.

The collection of lantern slides was increased by the gift of a series of slides illustrating pellagra, by Dr. C. C. Bass, at the last annual meeting.

LIBRARY.—Last year the library consisted of 22 bound volumes and 1,106 pamphlets, and numbers of medical periodicals. During the year 3 bound volumes and 311 pamphlets and medical periodicals have been added, making the library now contain 25 bound volumes and 1,417 pamphlets and medical journals.

MEMBERSHIP.—In 1910 the membership in the society was as follows: Active members, 131; corresponding members, 17; honorary members, 42. During the year one honorary member died, His Excellency Robert Koch, and one honorary member has resigned and applied for active membership, Dr. Milton J. Rosenau.

At the St. Louis meeting it was voted that any active member who was five years in arrears of dues be dropped from membership after he was notified of the action of the society and the amount in which he was in arrears. In accord with this resolution, seven active members have been dropped. Four active members have resigned. The membership on May 18th is 120 active, 17 corresponding, 40 honorary.

ACCESSIONS TO LIBRARY.—Isthmian Canal Commission, 12; *New York Medical Journal*, 29; United States Public Health and Marine Health Service, 43; Royal Academy of Medicine of Belgium, 6; *Revista del Circulo Medico Argentino*, 6; *Anales de la Academia de Ciencias Medicas Fisicas y Naturales de la Habana*, 6; *Bulletin de la Société Pathologique Exotique*, 6; *L'Institut Imperial de Médecine Expérimentale à St. Petersburg*, 1; Society of Tropical Medicine and Hygiene, 6; *Philippine Journal of Science*, 9; Sleeping Sickness Bureau, Royal Society, 9; *Gulf States Medical Journal*, 6; United States Naval Medical Bulletin, 1; Bailey K. Ashford, 1; S. T. Darling, 1; C. L. Alsbug, 1; Henry B. Ward, 4; John M. Swan, 40; *Sanidad y Beneficencia Habana*, 1; University of Upsala, 3; *Real Academia de Medicina di Roma*, 6; *China Medical Journal*, 2; Leonard Rogers, 2; John Guiteras, 1; W. C. Gorgas, 1; C. F. Craig, 2; W. P. Chamberlin, 1; E. D. Kilbourne, 1; John M. Swan, 40; *Southern Medical Journal*, 6; *New Orleans Medical and Surgical Journal*, 1; *Bulletin of Manila Medical Society*, 2; Thomas W. Jackson, 1.

(Signed) JOHN M. SWAN,

Secretary.

RESOLUTION ON DEATH OF ROBERT KOCH.

Resolved, That as the American Society of Tropical Medicine, at its meeting held in New Orleans on May 18 and 19, 1911, has heard the announcement of the death of one of its most illustrious honorary members, His Excellency Robert Koch, of Berlin, this society do place on record its sense of great loss to scientific medicine which results from the cessation of the activities of this master in these fields of inquiry.

Resolved, That the Secretary be directed to spread this action on the minutes of the Society.

Orleans Parish Medical Society Proceedings.

President, DR. B. A. LEDBETTER.

Secretary, DR. C. P. HOLDERITH.

141 Elk Place, New Orleans.

In Charge of the Publication Committee, DR. C. P. HOLDERITH, *Chairman*.
DR. HOMER DUPUY and DR. H. D. KING.

MEETING OF MAY 8, 1911.

DISCUSSION OF MISS SPYKER'S PAPER ON SPEECH DEFECTS.

DR. JOACHIM opened the discussion as follows: Preyer divides speech impairments into three classes: 1. Lesions of the perceptive tract, producing alalia and finally deafmutism.

2. Central lesions, evidencing themselves, as dysphasia, aphasia, or amnesia, etc.

3. Peripheral lesions in the muscular, respiratory or voice-producing apparatus.

Lesions of the auditory apparatus, either inherited or acquired, interfering with sound perception, belong to the first class. They often result in partial or entire loss of hearing and speech.

Of the impairments due to central lesions, our neurologic friends can cite, no doubt, many interesting cases.

The co-ordination of breathing, articulation and voice, is necessary to produce speech. If the muscular apparatus of any one of these functions is affected, speech becomes imperfect. Such a condition we have in harelip, cleft-palate, shortened frenulum of the tongue, adenoids, enlarged tonsils, etc. Ulcerative and various other conditions of the vocal chords affecting their function or conditions interfering with the breathing apparatus, all produce certain impairment of speech. A serious question arises in connection with cleft-palate in its relation to speech free from defects. The experience of the orthopedic branch of the profession should be of decided interest on this point. These speech defects are purely peripheral.

Enlarged tonsils and adenoids do not in themselves cause serious impairment of speech.

From the standpoint of the auro-laryngologists, speech defects due to acquired or congenital deafness are of the very greatest importance. Such impairments amounting to deafmutism exist in 7-8 in each 10,000; in Switzerland, even 24 in each 10,000.

It is without doubt true that neglected diseases of the ear or throat in early childhood cause deafness in a large proportion of children. The predilection of the ear as the seat of complication in most infectious diseases, is certainly known to you. The ear disease of childhood may lead to partial or total deafness, and with this to loss of speech. If deafness exists, mutism is not always its necessary and unavoidable consequence. It is also true that a large proportion of children afflicted with ear diseases can be saved from becoming deaf and mute. It is to be hoped that with enlightenment upon this important topic, many of these unfortunates can be saved to a useful life and happier existence. It is hardly necessary to point out the advantages of the modern method of instruction of the deafmute, which has for its object to teach the patient to recognize and understand speech by sight, as against the older method of communication and understanding by signs. It is sufficient to say that the aim of the modern instruction is to enable the educated deafmute to understand and to converse with all other people in a nearly normal way. By sign language even the best educated deafmute is able to make himself understood by and understand only those who are familiar with the special signs used by him.

Stammering, which is perhaps one of the most frequent speech defects, is in its nature known to all of you. It is a central neurosis of which the underlying abnormal anatomical condition has as yet not been discovered. It manifests itself as a spastic neurosis of co-ordination.

Involuntary muscular contractions of groups of muscles of the face, arms or legs occur in many patients of this class when they attempt to speak. Dr. McGuire related a case to me which presents a very rare complication in a stammerer. I would like for him to report this case to you. A case is known to me in which the marked tendency to stammering is suppressed and absolutely unnoticeable during recitation. It is not noticeable to stammerers during singing or whispering. Stammering occurs in France in about 6-7 in 1,000. Among children, it is twice as frequent in boys than in girls. In grown persons, only one woman stammers to nine men!

Another large class of defective speech we find in those who are unable to pronounce different vowels or different sets of consonants. These are called stutterers. These disorders being of central origin, there is necessarily but one rational means of cure. The proper pronunciation might be attained by a system of well-designed teaching and progressive exercise, until the voluntary and conscious use of the muscles becomes involuntary and unconscious. In this field Miss Spyker's work is to be especially commended and is deserving of our approval and support.

DR. E. DENEGRÉ MARTIN said the subject was one of great interest, but he thought it might well be extended to normal children, as these were prone to fall into bad habits from want of proper training. Too little attention was given to this branch of education in the schools. Children were not taught to articulate as they should, and reading distinctly was a lost art. He thought that, while discussing the subject, the fact might be brought to the attention of school teachers. He had visited a deaf-mute institution in Staunton, Va., and was much impressed by the methods in vogue there and the results obtained.

DR. HUMMEL: The writings of Dr. Gutzmann on the subject of so-called functional speech defects, and those of Von Monakow, Wernicke and others on the structure and pathology of the cerebral speech apparatus, are among the most recent and comprehensive contributions on this branch of medical science. For present pur-

poses we may leave out of consideration the aphasias and paraphasic conditions arising out of gross lesions of the developed speech mechanism from hemorrhage, softening, etc., and we may refer, for the most part, to the functional, so-called, speech disturbances. Gutzmann divides these into three groups: (1) Defects of receptive or impressive mechanism (deafness), (2) central defects, (3) and defects of the expressive apparatus (leading to inabilities or difficulties in conversation and articulation). Under the first group we encounter deaf-mutes who are deprived of auditory sense impressions upon which to develop the knowledge of speech. The difficulty in this instance is dealt with by teaching the subject to gather the needed information by sight and touch—watching the articulatory movements of a teacher, and observing same by touch. Very fruitful results ensue from patient exercise of such efforts. Defections of the central or trans-cortical apparatus are less accessible to efforts at treatment, except indirectly, by education. The third group of sufferers is made up chiefly of stutterers and stammerers. These patients all suffer from some agenesis of the central motor speech apparatus or a pronounced general neurosis, interfering with finely co-ordinated movements, such as are involved in the articulation of words. In such instances treatment is directed towards training the patient in more deliberate respiratory movements, leading to finer control, especially of expiratory movements, so intimately concerned in the production of speech.

A final word as to the possibility of training cases which have been deprived completely of the motor speech apparatus in the left hemisphere of the brain (right-handed subjects) by hemorrhage, etc., to speak with the corresponding center in the opposite hemisphere. We know that the hand and arm center is closely in relation with that of motor speech, and that education of the favored hand in sign language probably preceded the acquirement of motor speech in the race. Considerable success has been obtained in young subjects by training the uninvolved hand to writing and other finely co-ordinated movements. By thus exercising the neighboring and probably associated hand center we excite the motor speech area into development and taking up some function.

The speaker has raised many interesting points. We should heartily endorse such special work as she is conducting, as brilliant results often ensue from patient, intelligent efforts at overcoming these afflictions.

MISS SPYKER (in closing) : In closing this discussion I wish to state more clearly than I have done that malarticulation or inarticulation will be the inevitable consequence of faulty anatomic or diseased conditions in the peripheral organs of speech, and that the correction of such conditions is within the province of the physician and the surgeon, not within the province of the teacher.

In my opinion, there is little difference to be found in the character of stuttering, hesitation and stammering. Unless relieved, the two named first are degrees through which the sufferer passes to the last or more severe form of the same disturbance.

It is not possible to go into the details of teaching here. In the case of the stammerer, some nervous inhibition prevents the brain, or motive power, from stimulating the machinery of speech into action. The stammerer's first step should be to gain power and ease in the control of the breath; the next, to acquire a firm, steady tone of voice, and the next, to establish habits of distinct and delicate utterance.

In the case of the deaf-mute, no impression of speech having been conveyed to the brain, that agent is incapable of stimulating these organs to action, for the obvious reason that expression is the sequence and consequence of impression, and that without the one it is impossible to have the other. As I have already said, the deaf-mute is taught through the nasal and tactile avenues.

The last point touched upon in this discussion—enunciation and voice production in the education of the normal child—is of deepest interest to me, and I feel it is a subject which is greatly neglected, both in the home and in the school. Reading is an art, and should be taught as such by a *skilled* and competent instructor. The essentials of good reading are: An easy, pleasant use of the voice; clear, intelligent emphasis, and precise, fluent, elegant enunciation.

MEETING OF MAY 22, 1911.

(Held in the Amphitheater of the Charity Hospital.)

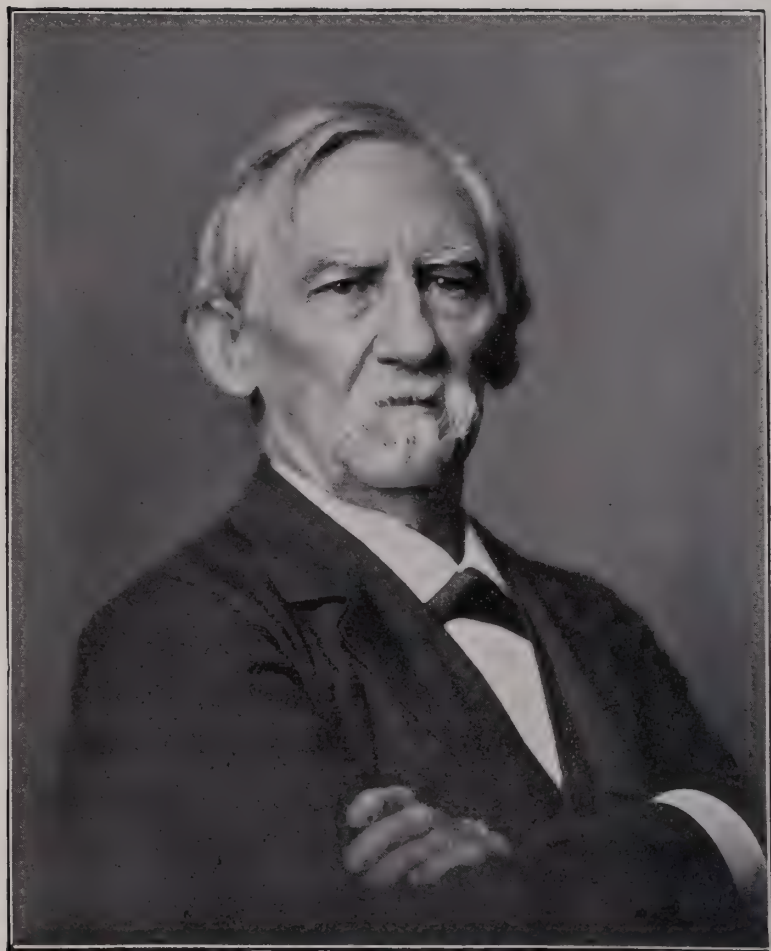
DR. E. DENEGRE MARTIN exhibited "A Case of Head Injury."

S. P., colored female, 24 years old, on Monday, April 27, while crossing her room, fell and struck her head against a cuspidor. The blow was severe enough to render her unconscious at the time. She recovered consciousness, however, and was taken to the hospital. There it was discovered that she had sustained a severe contused

wound of the scalp over the left parietal eminence, about two inches in length, exposing the bone and denuding the periosteum. The condition was not thought serious and the wound was cleansed and sutured.

Shortly after being sent to the ward she acted queerly, and it was believed that she was intoxicated. On Wednesday morning, the 28th, she was found unconscious and paralyzed on the entire right side. She remained in this condition for twenty-four hours, gradually recovering consciousness, but showing signs of aphasia. She was seen by Dr. McGuire, who diagnosed the condition as one of fracture. The symptoms gradually improved, and on Thursday morning, three days after the accident, when I operated upon her, the only sign of the trouble was complete paralysis of the right arm. Under anesthesia an incision was made through the wound and extending an inch on either side. The periosteum was found denuded for about one inch, and a depressed fracture was discovered one and one-half inches in length just above the line of the fissure of Rolando. Trephine openings were made with the Hudson drill along the line of the fracture and the edges of the bone trimmed with Debilvis' bone-cutter. This at once revealed an epidural clot, the center of which was immediately over the arm centers and extending in every direction, including the leg and speech centers. This was removed, the bleeding vessel ligated, the flap sutured in position and drained, as infection was already apparent. Within twenty-four hours the patient was restored to a normal condition, and has made, up to this point, an uneventful recovery. There is still a small sinus remaining which has not healed, but will be well in a short time.

The interesting point in this case is the danger of overlooking a fracture, a point which was impressed years ago by Roberts, Phelps and others, and which I myself have called special attention to for a long time. Especially in injuries which have been severe enough to cause unconsciousness is it of the greatest importance to search for a fracture, as these are often present, and, though they may give no sign of the severity of the injury at the time, are frequently the cause of serious complications later on, even where hemorrhage does not occur. This case, I think, demonstrates clearly the importance of a thorough and careful examination of all scalp wounds inflicted with a blunt instrument and serious enough to expose the cranium.



STANFORD EMERSON CHAILÉ.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

Stanford Emerson Chaillé.

We recollect an alert, energetic, active, soldierly personality, with a slightly bowed head—moving rapidly along Canal street, from the hospital—or sauntering to and from his lectures at the college.

A quick greeting—with a half-controlled smile, endeavoring to hide itself in a brusqueness which was at all times a marked mannerism of the man. Dogmatic in the teaching of principles, but broadly philosophic in his interpretation of humankind, such was Chaillé, the soldier, patriot, citizen, statesman, physician, teacher, scientist and friend. His work has touched the skeletal forces which have made State medicine, medical education and preventive medicine. In the field as a worker and in the sanctum, he builded for the present generation and for those to come.

Even if a narrow horizon prejudiced the opinion of some as to the scope of the administration of the Medical Department over which he presided, Dean Chaillé at all times conserved the principles of medical pedagogies, saw the future, and builded for it with a policy which at all times dictated that economy in administration was justified by a freedom from debt, and that efficiency must supersede reputation. Yet with the closing years, after his retirement, in 1908, no one could have watched more tenderly or with more concern the waxing innovations of a new régime—at places grafted on his own ideas, but in many other ways divergent. To those of us who have been privileged to his council it has been indeed a memorial of a great man to have the recollection of his last days—critical and commending as the new era opened.

His last stand at the dedication of the home of the Orleans Parish Medical Society probably foreshadowed the end—but, even

there, the "old warhorse," as he was so lovingly called, showed his mettle in an aggressive appeal to the younger generation to take up their rights in State medicine and to further the precepts Chaillé and his contemporaries had established before the Legislature in 1878.

When the historian comes to write of our late friend, his pen will hesitate now and then in placing the man in any niche apart from others of his day—for it is hard to write a man in any one field of action who, living to be an octogenarian, has for most of his active life filled so many fields of usefulness.

If it is success to have reached the level of superiority in every field of one's endeavor, then Chaillé was a success.

He came from Huguenot stock, saw the first light in Natchez, Miss., July 9, 1830; spent his student days at Andover, Mass., graduating from Harvard in 1851 as an A. B., in 1854 further consummating his A. M. degree. He studied in and graduated from the Medical Department of the University of Louisiana (now Tulane), receiving his M. D. degree in 1853. He served as interne in the Charity Hospital for the prescribed period, and afterwards with the Marine Hospital Service.

He was co-editor of the *NEW ORLEANS MEDICAL AND SURGICAL JOURNAL* (1857-1868), and in 1858 began teaching in the Medical Department of the University of Louisiana as Demonstrator of Anatomy.

The studies of Dr. Chaillé with Claude Bernard (1860-1861 and 1866-1867), his services in the Confederate Army, his resumption of teaching in the college and his gradual development into the great exponent of the principles of physiology, hygiene and pathological anatomy, in which chair he presided for over forty years—all are for the historian to detail.

In 1908 Dr. Chaillé retired from active connection with Tulane as Dean and professor—and settled down to the easy road to the everlasting end of things. The way was not free of care, and the years of mental activity had brought the burden of physical ills—racking a sensitive mind, too proud to bow to the pain which every day made worse.

Dr. Chaillé died Saturday, May 27, 1911, at five minutes past eleven. His medical friends watched by his bier until the funeral exercises on Sunday, May 28. These were simple and unosten-

taticus—the remains reaching their repose in the family vault in the Washington Cemetery.

The Confederate Veterans draped the coffin with the emblem of the Lost Cause—which he had helped to glorify—and as the cortège entered and as the saddened witnesses to the rites dispersed, the echoing notes of a sweet-toned bugle sounded the “taps” which called an old soldier to rest until the final roll.

International Postgraduate Medical Study.

At the Budapest Congress in 1909 a committee was formed with the idea of systematizing the information concerning medical opportunities in various countries so as to have various bureaus in different centers which could supply any specific information desired regarding any medical center at home or abroad.

Circulars of inquiry were distributed and data compiled, and now it is announced that the American Bureau of Information for Postgraduate Medical Education is located at No. 303 East Twentieth street, New York City. Any questions will be answered gratis, if with the questions a stamped envelope is enclosed for the reply.

This is a step in the right direction, and will afford student physicians of the future much better facilities than those heretofore obtained.

State Medical Society.

The thirty-second annual meeting of the Louisiana State Medical Society was held in Shreveport on May 30, 31, and June 1. The attendance was composed of 224 members and 16 physician guests. Of the 224 members, there were 42 from New Orleans, 46 from Shreveport, 12 more from Caddo, and the remaining 124 from the various other parishes. An analysis of these figures shows that less than a fifth of the attendance was from New Orleans, and represented about an eighth of the membership of the local Society, while the remaining four-fifths consisted of fully a fourth of the country members.

The meeting was a successful one from every point. While there

were fewer papers, perhaps, those that were read were above the average and were ably discussed. We have always thought it undesirable to stimulate the production of ordinary papers.

The entertainments were very enjoyable, and as numerous as time permitted. On the first day the Ladies' Committee entertained at a lawn party in the late afternoon on the lovely grounds of Dr. and Mrs. Milton Smith's home. A bevy of pretty girls and handsome matrons received and feasted the guests in a charming manner, winsome lads and lassies adding to the pleasure by means of a May-pole and other dances. The second day a delicious luncheon was tendered by the North Louisiana Sanitarium, also on the lawn, under tents. For the last day there was a luncheon at the Schumpert Memorial Sanitarium, also a delightful affair, and the crowning event, the banquet tendered by the Shreveport Medical Society, who outdid themselves. It is unfortunate that the hot wave, then prevalent all over the country, did not spare Shreveport, and led many to leave as soon as the session proper was over. The great preparations and intelligent arrangements of our Shreveport friends deserved to be appreciated by a larger number, but those who stayed were amply repaid, and voted the banquet a "corker."

The House of Delegates attended strictly to business, and did some important work, as will appear in its proceedings soon to be published in the *JOURNAL*.

Dr. Simmons, of Alexandria, and Dr. Willis, of Shreveport, were elected president and first vice-president, respectively, and New Orleans was chosen as the place of meeting next year, in April.

Sanct Fourth of July.

This is the time for physicians to urge upon parents the advisability of having the children celebrate the national holiday in a safe manner, to the elimination of dangerous fireworks.

As it cannot be expected that all will receive or heed the advice, it would be well for all practitioners to be prepared to administer tetanus antitoxin, or antitetanic serum, to all those unfortunates who will pay for their heedlessness with wounds from toy cannons, blank cartridges, etc.

Less of this form of celebration is indulged in at this season in the South than at Christmas, yet there is enough to justify preparedness on the part of the provident.

New Volume and Department.

With this issue we begin a new volume, and as a new feature we begin the publication of a new department styled the "Charity Hospital Bulletin." Its purpose will be to utilize, for the information of all, the enormous amount of clinical facts accumulated and accumulating in the data of the Charity Hospital. As it will be under the able direction of the house-surgeon, Dr. Danna, who will receive the co-operation of the house staff and the visiting staff, we feel sure the new department will prove of interest and benefit to our readers; it will be also an evidence of our desire to improve and progress, thus retaining for the JOURNAL its rank as one of the oldest and best in this country.

Abstracts, Extracts and Miscellany.

Department of Obstetrics and Gynecology.

In Charge of DR. P. MICHINARD and DR. C. J. MILLER, New Orleans.

RELATIONS OF BILIARY LITHIASIS TO PREGNANCY AND LABOR.—J. Audebert and R. Gilles (*Ann. de gyn. et d'obst.*, November-December, 1910—*Amer. Jour. Obst.*, May) discuss the relations of pregnancy and labor to the production of gallstones and the proper treatment of these conditions. Of the causative relation between the pressure of the uterus, the changes in metabolism of the pregnant state and the production of biliary lithiasis, there seems to be no doubt. There is a defect of the bile circulation from the pressure of the uterus, and the nutritive troubles incident to the presence of the fetus, resulting in an acid reaction, tend to cause precipitation of the bile salts. The presence of bacteria assists in the occurrence of infections of the bile passages. The first prominent symptoms are due to the migration of the stones: colic, vomiting and icterus. In other cases an empyema of the gall-bladder occurs, with symptoms of septicemia. Prophylactic treatment will address itself to prevention of infection by the bacillus

coli. Stagnation of the contents of the bowels should be prevented by cholagogue cathartics and a diet that will avoid fermentation. Washing out of the bowels and stomach is of value. Palliative measures in cases of colic include hot applications and sedatives. Obstetrical treatment will seldom be called for. Operation can, in most cases, be delayed until after delivery. In only the most serious cases should operation be undertaken during pregnancy. Then cholecystotomy is usually sufficient. After labor has taken place operation may be done, preferably cholecystotomy.—MILLER.

ACTUAL INDICATIONS FOR THE CONSERVATIVE CESAREAN SECTION.—Cyrille Jeannin (*Prog. Med.*, Dec. 17, 1910—*Amer Jour. Obst.*, May) says that we must temper our enthusiasm for the Cesarean section, and acknowledge certain restrictions in our work. This is an operation that gives a certain percentage of post-operative deaths, 4 to 5 per cent. The operation is easy and elegant in a first operation; long and difficult in a second performance on the same subject. We must acknowledge that we can never insure that the cicatrix will always be sufficient to prevent the possibility of uterine rupture in a second pregnancy. Puerperal infection is an effectual contraindication to the performance of this operation. It should be done only when it is formally indicated; this happens when no other operation is possible; when this operation is less dangerous for the mother than any other, and may save the life of the child. Cases in which the operation may be considered include bony deformities, dystocia from condition of the soft parts, maladies and accidents of pregnancy, labor in a woman in the death agony, or already dead. Taking up each of these conditions separately, the author considers first rachitic pelvis so small that natural labor is impossible. Here operation is indicated, and should better be done as near as possible to the normal time of labor, but with ordinary surgical conditions fulfilled. In kyphotic pelvis, when delivery is impossible, Cesarean section is justified. In tetanus of the uterus, with danger of rupture, immediate section is justifiable. In obstacles caused by the condition of the vagina, cervix or other soft parts, the section is not indicated. Accidents and diseases of pregnancy do not justify its performance. This operation should be performed only under the best of conditions, with proper assistance, asepsis, and with all the ordinary requisites for laparotomy. It is especially indicated in contracted pelvis,

yielding the first place to the vaginal operation in accidents of pregnancy, and to the mutilating Cesarean section in dystocia due to the soft parts.

MILLER.

Department of Therapeutics and Pharmacology.

In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

THE USE OF A SALT-POOR DIET.—Leva (*Med. Klinik*, 1910, vi, 782) gives a review of the literature dealing with the different indications for a salt-poor diet. He then discusses more particularly the practical application of such a diet, and gives valuable tables showing the salt content of various articles of food based upon 360 analyses. There are included in his tables many foods poor in salt content that serve to make a liberal mixed diet in cases in which abstention from salt is indicated. These tables should be consulted for details, as only general statements are given here. Meat is the one article that seems to require considerable salt to render it palatable. Some of the meat foods contain a higher percentage of salt to start with. Butter sauces, and sauces with egg-yolk, oil, vinegar, lemon, etc., will take the place of salt if given with any of the meat foods. Eggs may be used to supply protein, as they contain only a small percentage of salt. Soups and meat extracts require large amounts of salt to render them palatable. Vegetables are, as a rule, low in salt content, with the exception of celery, carrots, savoy, spinach, cauliflower and some varieties of winter cabbage. Bread should be made without salt and eaten with sweet butter. Some varieties of cheese contain a high percentage of salt, while others are poor in salt. Most of the mineral table waters contain a large percentage of salt. Cocoa, milk, malt beverages, tonics, coffee, tea, etc., are low in their salt content. Cereals form an important part of the salt-poor diet, as they contain only small amounts of salt. Cream and sugar can be freely used. Both fresh and cooked fruits may be taken in abundance. Canned goods should be excluded, as they usually contain a considerable amount of salt.

Leva says that horseradish, mustard and vinegar may be used to disguise the lack of salt in a salt-poor diet. J. A. S.

ALUM BATHS IN TYPHOID FEVER.—Boggs (*Jour. Amer. Med. Assn.*, 1910, liv, 2124) says that for two years alum baths have been used as a routine method of treatment in the wards of the Johns Hopkins Hospital, with a reduction of 50 per cent in the incidence of such skin complications as boils, abscesses, dermatitis, bed-sores, etc. The procedure is very simple, and is carried out as follows: One pound (500 grams) of powdered alum is quickly dissolved in a little hot water and added to the tub during the filling. With the average tub of 450 to 500 liters this makes approximately a 1 to 1,000 solution. The cost is about four cents per bath. The patient is bathed in the alum solution just as in ordinary water, and experiences no inconvenience from the presence of the drug. The only noteworthy changes in the skin are a slight increase in desquamation during convalescence and a decided diminution in the incidence of skin complications of all sorts. In these cases the care of the skin is the same in all except for the alum baths. It is not suggested that the alum baths can replace the rigid care of the skin in the ordinary way, but that with them the frequency of skin complications will be still further reduced. J. A. S.

Charity Hospital Bulletin.

In Charge of DR. J. A. DANNA, House Surgeon.

BRIEF RESUMÉ OF THE WORK OF THE PASTEUR INSTITUTE OF THE
CHARITY HOSPITAL, FROM JANUARY, 1904, TO JUNE, 1911.

By DR. O. L. POTHIER,

Director of Pasteur Institute and Pathologist of the Charity Hospital.

The Pasteur Institute of the Charity Hospital was inaugurated in 1903 at a meeting of the Board, acting on a letter that was submitted by Dr. O. L. Pothier, pathologist. The virus was donated

by Dr. I. I. Lemann, who obtained it during the summer of 1903 from Dr. Keirle, of Baltimore. This virus was propagated in the laboratory pending the action of the Board, which took place in the latter part of 1903, and the first case was treated on January 6, 1904. We are using still the same virus, which has been propagated ever since.

The method of treatment used was at first the eighteen-day immunizing treatment as recommended by Pasteur. Finding, however, that it was difficult to ascertain positively the condition of the animal inflicting the bites, either because the animal had been killed or that it was a stray animal of which nothing could be obtained, I decided to administer, for greater safety, the twenty-one-day intensive treatment as a routine treatment. For the last six years this treatment has been given in all bites, except those of the head and neck; in those latter cases thirty-one-day treatment is given. The difference between the ordinary immunizing treatment (eighteen days) and the intensive treatment (twenty-one days) lies in the fact that the weak cords in the latter treatment are doubled and that the first administration of the third-day cord is given two days earlier than in the ordinary treatment—that is, on the seventh instead of the ninth day—and that the stronger cords are prolonged to a period of twenty-one days instead of eighteen.

Whenever possible, the brain of the animal inflicting the bite is examined. This examination is only corroborative—that is, if the negri bodies are not found, the patient is treated notwithstanding. Animal inoculations have been made frequently as corroborative evidences, though this is not always done. In cases of doubt—that is, where the animal cannot be observed or where examination or inoculations cannot be made, the patient is given the benefit of the doubt and is always treated. The directions given to all patients bitten are that, above all, the animal inflicting the bite should not be killed, and should be kept under observation for a period of at least six days. Should the animal remain well during that period the patient is discharged without treatment. In all cases where the animal is killed, and where nothing is known of its previous condition, the patient is advised to take the treatment. Where it is positively known that the killed animal has not been bitten within

the three months immediately preceding the time at which it inflicted the bite on the patient, the latter is discharged. Where there is the slightest doubt as to this, or as to the condition of the animal, treatment is advised, for it is a well-known fact that any animal developing rabies presents a virulent saliva six days before any of the other symptoms appear. The animal may, to all appearances, be perfectly healthy, and yet the saliva is virulent. A bite at that time, or a smear of that saliva on an abraded surface, is sufficient to produce rabies, hence the precautions taken. We prefer to make an error in treating too many cases rather than restrict the treatment within narrow limits.

One is amazed at the carelessness of the people. Patients will come to the Pasteur clinic. Some are frantic about it, and yet very few can give an intelligent account of the animal, except that they have killed it. This, of course, happens nine times out of ten. In some instances heads will be brought, but in the majority of cases they do not even do that. In the general run of cases no attempt is made to localize the animal or to find out anything about it, and it is with difficulty that we can impress the importance of this knowledge. Many of the lower class of patients are apparently totally indifferent, and seem to apply to the institution merely because they have been directed to do so by friends or the family physician. Others, among the more intelligent, on the contrary, are very excitable, nervous and, and will return several times for advice, even though there is no danger. Some of them are haunted with the fear of hydrophobia, when there is absolutely no cause for it. In certain cases, after the treatment is started, this excitable and nervous condition apparently disappears, though it may persist in some cases. In all cases, however, during the latter part of the treatment, and for a period of time varying with different cases, they remain exceedingly nervous and irritable. In many cases insomnia and various other nervous symptoms are complained of.

In our classification of cases we have adopted that of the Pasteur Institute in Paris. We have divided the cases into classes A, B and C. Class A includes those cases where we have positive proof of hydrophobia in the animal inflicting the bite, these proofs consisting of the observation and laboratory corroborations. Class B includes cases where animals are reported positively to be mad by

a physician or a veterinary surgeon. Class C represents all of the unknown cases.

Since the opening of the Pasteur Institute we have had 3,224 cases at the clinic. Of these, 1,812 were dismissed without treatment, and 1,412 were treated. Of the treated cases, 179 belong to Class A, 188 to Class B and 1,045 to Class C. We have had 119 cases that deserted before the completion of treatment, and we had 10 deaths. We had, therefore, 1,293 cases which have followed their treatment throughout.

If we calculate the mortality from the total number of cases treated, it gives us a little over .7%. If we confine our mortality to classes A and B, we have 3.78%. This latter percentage, however, would not be an accurate one, as a number of cases developed hydrophobia among our deserted ones, and consequently we have to include all the treated cases.

Following will be found tabulated the residences of the non-treated and treated cases:

NON-TREATED CASES.		TREATED CASES.	
Louisiana	1,762	Louisiana	859
Mississippi	36	Mississippi	395
Georgia	1	Texas	28
Florida	1	Alabama	39
Alabama	1	Arkansas	36
Texas	2	Wisconsin	1
Arkansas	2	Georgia	1
Tennessee	3	Tennessee	40
Oklahoma	1	Kentucky	1
New York	1	Oklahoma	4
Illinois	2	Cuba	4
<hr/> 1,812		<hr/> 1,412	

The following tabulation of the cases dying or supposed to have died of hydrophobia should be of interest. Three of these cases failed to report for the entire treatment. Two cases were reported to have died of hydrophobia by relatives; we have no positive knowledge of the fact.

CASES DYING OF HYDROPHOBIA.

Case No.	Age	Location of Bite.	Date Admitted.	Date Cauterized.	Date First Treatment.	Date Discharged.	Symptoms Appeared.	Date of Death.	REMARKS.
1	8	Left hand and forehead.	Nov. 25, 1906.	Nov. 25	Nov. 28	.....	Dec. 24	Dec. 26	
2	9	Head, cheeks, nose, arm, thumb.....	Feb. 28, 1907.	None	March 2	.....	March 20	March 23	
3	77	Right hand	Jan. 22, 1908.	Jan. 22	Jan. 23	Feb. 17	March 20	March 24	Failed to report Jan. 26.
4	38	Both hands and neck....	March 26, 1908.	March 27	March 23	.....	May 1	May 6	21 treatments to April 27.
5	39	Right hand, left finger..	April 24, 1908.	April 24	April 25	May 21	March 1	March 6	
6	8	Right foot	July 17, 1908.	None	July 20	.....	June 21	June 25	{ Reported by telegram to have died of hydrophobia. Injured by nail few days before discharged. No antitetanic serum used.
7	8	Both hands, right leg..	July 23, 1908.	July 25	July 28	Aug. 27	July 31	Aug. 2	
8	40	Face and left leg.....	June 29, 1909	June 29	July 1	Deserted	.....	Sept. 12	
9	14	Right hand	March 13, 1910.	None	March 19	April 15	Aug. 7	Aug. 8	Failed to report July 4 and after July 6.
10	14	Right thumb	April 21, 1911.	April 21	April 25	Deserted	.....	May 1	Letter from sister.
							May 23	May 28	Failed to report April 26.

NOTES.

At a recent meeting of the resident corps of the Charity Hospital a motion was adopted to request the different members of the visiting staff to give semi-monthly lectures to the ambulance corps. Each man will be asked to give a talk on some subject that he has made a specialty of, or that is his "hobby." The lectures will be from the standpoint of personal experience and opinion, thus saving the talker the task of preparation and the listeners the tedium of a text-book lecture.

The corps feels that they will derive great benefit from such impromptu talks, both in the ward work of the hospital and in future practice. It is hoped that the visiting staff will give their co-operation.

Dr. Danna opened the lectures on the evening of June 12 at 8 o'clock, in the amphitheater of the Charity Hospital, with a very interesting talk on the Treatment of Appendiceal Abscess.

Medical News Items.

THE TRI-COUNTY MEDICAL SOCIETY met in Brookhaven, Miss., June 7. The subject of gastro-enteric diseases of children was discussed generally. The next meeting of the Society will be August 1, at which time the general subject for discussion will be malaria.

THE MEETING OF THE LOUISIANA DENTAL SOCIETY was held at Hammond on May 22 and the following officers were elected: President, Dr. J. D. Killian; vice-president, Dr. Joseph Jones; secretary-treasurer, Dr. John F. Burgess; executive committee, Dr. H. J. Feltus, chairman; Dr. G. H. McCowen, Dr. M. V. Marmande, Dr. J. A. Richard, Dr. Tines.

THE LOUISIANA STATE MEDICAL SOCIETY elected the following officers: Dr. R. O. Simmons, president; first vice-president, Dr. J. C. Willis; second vice-president, Dr. B. A. Ledbetter, New Orleans; third vice-president, Dr. Otis Edgerton, Arcadia; secretary, Dr. Jos. D. Martin, New Orleans; treasurer, Dr. C. C. Bass, New Orleans; assistant secretary, George Augustin, New Orleans. The Councillors: First Congressional District, Dr. P. E. Archinard, New Orleans; Second Congressional District, Dr. H. B. Gessner,

New Orleans; Third Congressional District, Dr. H. L. Ducrocq, Lafayette; Fourth Congressional District, Dr. Randall Hunt, Shreveport; Fifth Congressional District, Dr. I. G. Newton, Monroe; Sixth Congressional District, Dr. L. G. Stirling, Baton Rouge; Seventh Congressional District, Dr. L. Lazaro, Washington, La. The delegates to the American Medical Association were elected as follows: Dr. Charles Chassaignac, of New Orleans, and Dr. Oscar Dowling, of Shreveport; alternates, Dr. Joseph D. Martin, of New Orleans, and Dr. J. M. Blackman, of Monroe.

THE GERMAN SOCIETY FOR UROLOGY will hold its third congress in Vienna on September 11, 12 and 13, 1911. The preliminary programme has been issued, but the complete programme will not be published until July.

THE THIRD INTERNATIONAL LARYNGO-RHINOLOGICAL CONGRESS will be held in Berlin, at the Herrenhaus, Leipzigerstr. 3., from August 30 to September 2, 1911.

GRADUATING EXERCISES OF THE SCHOOL FOR NURSES OF THE PRESBYTERIAN HOSPITAL was held at No. 719 Carondelet street on June 2, 1911. Eight graduates received awards of merit, as follows: Ida May Daspit, Houma, La.; Katheryn C. Barrett, New Orleans; Maida Diel, Clarence, Mo.; Helen Kemp Parker, Little Rock, Ark.; Marie Dolores Hava, New Orleans; Margaret R. Wintz, White Castle, La.; Lade Eleanor Stanley, Dublin, Georgia, and Emma L. Thoma, St. Francisville, La.

THE NEW ORLEANS DISPENSARY FOR WOMEN AND CHILDREN GRADUATED ITS FIRST NURSE on May 23. Miss Fannie B. Glover, of New Orleans, has the honor of being awarded the first diploma in trained nursing of that institution. Dr. Sara T. Mayo gave an address, and a pleasant surprise for the occasion was Mayor Behrman's personal gift of \$50.00 to the Dispensary.

THE PICAYUNE LOVING CUP was presented to Dr. Sarah Tew Mayo, in the music room of the St. Charles Hotel, Friday, May 26, 1911.

APPROPRIATION FOR THE STUDY OF CANCER.—On May 11 the Governor of New York signed a bill appropriating \$65,000 for the establishment in Buffalo of a hospital to conduct investigations

into the cause, nature, treatment, prevention and cure of cancer and allied diseases.

THE VIRGINIA HOSPITAL FOR EPILEPTICS has been opened at Lynchburg, and over one hundred epileptics have been sent to it from Various State insane asylums.

SHREVEPORT'S NEW HOSPITAL DEDICATED.—The new Schumpert memorial sanitarium, which was erected at a cost of more than \$100,000, and is a gift from the late Dr. T. E. Schumpert, of Shreveport, was formally dedicated and opened for use on May 16.

GALLARD'S SOUTHERN MEDICINE has been amalgamated with *Pediatrics*, and the new office is 355 West 145th street, New York.

THE MONROE CITY BOARD OF HEALTH elected the following members: Dr. W. R. O'Donnell, Dr. R. W. Faulk, Dr. O. W. Cosby, W. A. Walker, Joe Lemle.

VOLUME 1, No. 1, of the *Journal of the Southern States*, Mobile, Ala., Dr. J. H. McCormick, editor, has been received. It makes a fine appearance and will be devoted to preventive medicine and therapeutics.

THE HARRISON COUNTY MEDICAL SOCIETY held an interesting meeting at Gulfport, Miss., on June 13. Many interesting discussions were held, and the Society adjourned to meet again next month at the Great Southern Hotel.

THE MISSISSIPPI STATE PHARMACEUTICAL ASSOCIATION held their ninth annual convention at Greenville, Miss., on June 13. The convention was presided over by President W. P. Craig, of Indianola, and was a decided success.

PERSONALS.—Dr. and Mrs. J. T. Halsey and family sailed shortly from New York for Europe, and expect to spend most of their time in Vienna, where Dr. Halsey will pursue his professional studies.

Dr. C. Jeff Miller has been elected Professor of Clinical Obstetrics and Clinical Gynecology in the Tulane Medical Department (undergraduate).

Dr. and Mrs. M. Couret sailed last month on the steamer California for Europe, and will be gone until the early autumn.

Dr. and Mrs. Laurence R. DeBuys left New Orleans on June 19

for Los Angeles, Cal., where Dr. DeBuys will attend the convention of the American Medical Association.

Dr. and Mrs. Robert Alexander Strong sailed on June 8 for Europe.

Dr. and Mrs. E. J. Lyons, of Lake Charles, celebrated their golden wedding anniversary on May 19. The JOURNAL extends its congratulations to Dr. and Mrs. Lyons.

Dr. Isadore Dyer left the middle of June for a month's vacation.

Dr. W. W. Butterworth addressed the Era Club on May 27. His subject was "Infant Mortality." Dr. Butterworth was recently elected to membership in the American Pediatric Association.

Dr. Charles W. Duval lectured before the Jesuit Alumni Association, May 24, on "Recent Experimental Work Which Promises a Cure for Leprosy."

Memorial services for Dr. Albert J. Mayer were held at the Touro Infirmary on June 11. Dr. Rudolph Matas delivered an address, and following the services in Touro Chapel a tablet in memory of Dr. Mayer was unveiled in the clinic of which he had charge.

Dr. Otto Joachim was elected vice-president and chairman of the Southern Section of the American Laryngological, Rhinological and Otological Society at the last annual meeting, held in Atlantic City on June 1-3.

Dr. A. Nelken and Dr. P. J. Kahle announce that they have formed a partnership.

Dr. A. J. Azar, of St. Martinsville, has been appointed a field inspector for the Rockefeller Sanitary Commission in Louisiana.

REMOVALS.—Dr. T. S. Jones, from St. Francisville, La., to Baton Rouge.

Dr. J. L. Violet, from Hope Villa, La., to McElroy.

Dr. R. P. Thaxton, from Boleyn, La., to Hill.

Dr. A. J. Hill, from West Monroe, La., to De Ridder.

MARRIED.—On June 7, 1911, Dr. Carroll W. Allen to Miss Lydia H. Fayers, both of this city.

On June 14, 1911, Dr. Samuel Logan to Miss Adele Matthews, both of this city.

On June 3, 1911, Dr. Randolph Lyons to Miss Marie Celeste Maury, both of this city.

On June 6, 1911, Dr. Albert C. England, of Pittsfield, Mass., to Miss Ada Seiferth, of Natchez, Miss.

On June 10, 1911, Dr. Robert Stewart, of Vernado, La., to Miss Mattie Garrett, of Poplarville, Miss.

DIED.—On May 22, 1911, Dr. Pierre M. Fourgette, of New Orleans, aged 54 years. Dr. Fourgette was physician for the French Society for more than twenty-eight years.

On May 18, 1911, at Hot Springs, Ark., Dr. A. D. Alexander, of Mer Rouge, La.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of respective publications. The acceptance of a book implies no obligation to review.

Principles and Practices of Modern Otology, by JNO. P. BARNHILL and ERNEST DE WOLFE WALES. Second edition. W. B. Saunders & Co., Philadelphia.

This work is intended especially for students and practitioners of general medicine, for whose purpose it is especially well suited. The text is brought thoroughly up to date, and special efforts have been made to correct those traditional beliefs that are both obscure and untrue, and to advocate in their stead the earliest possible prophylaxis or treatment.

This work well deserves a place in the library of every man who pretends to keep abreast of the times.

LYNCH.

Diseases of the Nose, Throat and Ear, by WILLIAM LINCOLN BALLENGER, M. D. Lea & Febiger, Philadelphia and New York.

This work ranks as one of the very best that has thus far appeared in the English language. Dr. Ballenger's descriptions of operative procedures are especially notable for their clearness and conciseness. Combining this with so profusely an illustrated text as this is, makes the work a true working atlas.

As special features of this new edition, one may mention Dr. Goldsmith's operation for the closure of recent perforation of the septum, introducing Dr. Yankauer's intra-nasal suture; the decidedly enlarged chapter on sinus surgery, with especial attention to the Ballenger-Canfield operation on the antrum of Highmore.

The prominence of vaccine therapy in the treatment of the infectious diseases of the sinuses, ear, throat and meninges is noteworthy in this edition. Sluder's tonsillectomy is decidedly new and is minutely described. The functional examination of the vestibular apparatus has been revised, and the section on the surgery of the labyrinth practically rewritten.

In all, this book is a fitting tribute of an American author to this department of medicine, and I heartily recommend it to all interested in diseases of the ear, nose and throat.

LYNCH.

Age, Growth and Death, by CHARLES P. MINOT, M. D. Putnam's, New York.

To be able to philosophize over the influences in life which bring on decadence before nature intended, is a privilege of those who have passed the meridian and to whom the vista of a short road is no horror.

Our friend of many sides in learning has left aside the narrow definition of an optical view, and introspectively has written of the results of long observation and of profound deduction, meantime proving out certain problems by the way of the laboratory.

Metchnikoff was more dramatic in his review of the causes of old age, bringing on his stage the psychic sides of the lives of many men, great in science, art and literature. Dr. Minot writes strongly of Metchnikoff's conclusions, but his sentiment is carried in a minor key, throughout the book sounding a refrain of his own knowledge—found only soon enough to lay in the service of those to come.

After all, there is truth in each of these new theories of old age, of growth and of death, but none save the last is definite and certain.

One cannot analyze such a book; it must be read—and so wholesome is the philosophy that it may be read over and again with renewed interest in the spring sources of eternal youth which are born in the theories of a man who has taken time to think.

DYER.

The Essentials of Histology, by E. A. SCHAFER, M. D., Sc. D., LL.D., F. R. S. Eighth edition. Lea & Febiger, Philadelphia and New York.

With an increased number of illustrations the eighth edition of this work again bids for the consideration of student and teacher. The arrangement of the text is excellent and the multitude of graphic illustrations and to the value of the book as a guide to the student.

DYER.

A Text Book of Bacteriology, by PHILIP HANSON HISS, JR., M. D., and HANS ZINSSER, M. D. D. Appleton & Co., New York and London.

Beginning with a broad review of the definition, purposes and scope of bacteriology, this book considers the divisions of bacteria, their morphology, methods of cultivation and destruction, and their relation to modern theories of disease. Oposonins, aggressins, anaphylaxis, etc., all receive full notice.

Then follow in full discussion the various organisms studied in the laboratory, each presented in careful detail from many points of view. The work concludes with a review of diseases of unknown origin, and there is given the relation of these to the bacteriologic field. Altogether a contribution of noteworthy importance and of excellent promise as a text.

DYER.

Progressive Medicine. Edited by HOBART AMORY HARE, M. D., and LEIGHTON F. APPLEMAN, M. D. Vol. XIII, No. 1. Lea & Febiger, Philadelphia and New York.

This volume of this well-known quarterly deals with Surgery of the Head, Neck and Thorax (C. H. Frazier); Infectious Diseases, including Acute Rheumatism, etc. (Ruhrah). Under the head of Diseases of Children (Floyd Crandall) and Rhinology and Laryngology (Kyle) many subjects are discussed—as well as in the text under the first two headings. As to other issues, this volume is replete with valuable commentaries on current topics.

DYER.

Publications Received.

LEA & FEBIGER, Philadelphia and New York, 1911.

Progressive Medicine. June 1, 1911. Edited by Hobart Amory Hare, M. D., assisted by Leighton P. Appleman, M. D.

F. BLAKISTON'S SONS & CO., Philadelphia, 1911.

Manual of Diseases of the Ear, Nose and Throat, by John Johnson Kyle, B. S., M. D. Third edition, revised and enlarged.

The Principles and Practice of Bandaging, by Gwilym G. Davis, M. D. Third edition, revised and enlarged.

WILLIAM WOOD & CO., New York, 1911.

A Practical Medical Dictionary, by Thomas Lathrop Stedman, A. M., M. D.

C. V. MOSBY COMPANY, St. Louis, 1911.

Golden Rules of Pediatrics, by John Jahorsky, A. B., M. D., with an introduction by E. W. Saunders, M. D.

MISCELLANEOUS.

One Thousand Surgical Suggestions, by Walter M. Bickner, B. S., M. D. (Surgical Publishing Company, New York, 1911.)

Tuberculosis as a Disease, and How to Combat It, by S. Adolphus Knopf, M. D. (The Survey, New York, 1911.)

Transactions of the American Pediatric Society. Twenty-second Session. (E. B. Treat & Co., New York, 1911.)

Education and Preventive Medicine, by Norman Edward Ditman, Ph. D., M. D. (The Columbia University Press, New York, 1911.)

The Evolution of Urine Analysis. (Burroughs, Welcome & Co., New York and London, 1911.)

Merck's Manual of the Materia Medica. (Merck & Co., New York, 1911.)

Thirty-third Annual Report of the Department of Public Health, Augusta, Ga., for the year ending November 30, 1910. (Williams Printing Company, Augusta, Ga., 1911.)

A Tuberculosis Directory, compiled for the National Association for the Study and Prevention of Tuberculosis, by Philip P. Jacobs, Ph. D. (105 East Twenty-second street, New York, 1911.)

The American Society of Tropical Medicine. Volume V, 1910. Papers read before the Society and published under its auspices.

Reprints.

Nitrous Oxid and Oxygen; 13,000 Administrations of Nitrous Oxid with Oxygen as an Anesthetic, by Charles K. Teter, M. D.

An Experimental and Clinical Research Into Nitrous Oxid vs. Ether Anesthesia, by George W. Crile, M. D.

The Value of Phenolsulphonethalein in Estimating the Functional Efficiency of the Kidneys, by Charles Goodman, M. D., and Leo Kristeller, Ph. D.

The Arylarsonates in the Treatment of Syphilis and Pellaagra, by E. H. Martin, M. D.

Pellagra in Buffalo, by Grover W. Mende.

Glycosuria, by S. H. Blodgett, M. D.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans
FOR MAY, 1911.

CAUSE.	White.	Colored.	Total.
Typhoid Fever.....	3	6	9
Intermittent Fever (Malarial Cachexia)		1	1
Smallpox.....			
Measles	8	1	9
Scarlet Fever	2		2
Whooping Cough.....	22	5	27
Diphtheria and Croup.....			
Influenza	1	2	3
Cholera Nostras.....		1	1
Pyemia and Septicemia	2	1	3
Tuberculosis.....	32	42	74
Cancer	18	11	29
Rheumatism and Gout			
Diabetes	4	2	6
Alcoholism	2		2
Encephalitis and Meningitis.....	9	3	12
Locomotor Ataxia.....		1	1
Congestion, Hemorrhage and Softening of Brain.....	22	5	27
Paralysis	4	2	6
Convulsions of Infants	3		3
Other Diseases of Infancy	14	8	22
Tetanus	1	2	3
Other Nervous Diseases	2	1	3
Heart Diseases.....	44	40	84
Bronchitis	3	5	8
Pneumonia and Broncho-Pneumonia.....	9	26	35
Other Respiratory Diseases.....	2	4	6
Ulcer of Stomach.....			
Other Diseases of the Stomach	4	5	9
Diarrhea, Dysentery and Enteritis.....	44	34	78
Hernia, Intestinal Obstruction.....	1		1
Cirrhosis of Liver.....	6	1	7
Other Diseases of the Liver	3	1	4
Simple Peritonitis	2	2	4
Appendicitis.....	3	1	4
Bright's Disease	24	17	41
Other Genito-Urinary Diseases.....	10	6	16
Puerperal Diseases	3	6	9
Senile Debility	4	1	5
Suicide	6		6
Injuries.....	23	15	38
All Other Causes.....	30	15	45
TOTAL	370	273	643

Still-born Children—White, 20; colored, 24; total, 44.

Population of City (estimated)—White, 272,000; colored, 101,000,
total, 373,000.

Death Rate per 1000 per annum for Month—White, 16.32; colored,
32.43; total, 20.68.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 30.02
Mean temperature 76.00
Total precipitation .. 2.20 inches.
Prevailing direction of wind east.

New Orleans Medical and Surgical Journal.

VOL. LXIV.

AUGUST, 1911.

No. 2

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

The Surgical Treatment of Amebiasis.*

By WILLIAM SEAMAN, M. D., Surgeon, U. S. Navy.

I shall attempt to discuss in my paper to-day the surgical treatment of the intra-intestinal lesions of amebic dysentery and their occasional sequelæ—stenosis and perforation.

The pathological conditions caused by the migration of the protozoa beyond the intestines, and requiring surgical intervention, I am pleased to leave to more eminent surgical authority.

The treatment of dysentery, until the identification of the ameba as the etiological factor by Osler in 1890, was solely by drugs, diet and rest. Thenceforward a scientific advance was made in the practice of attempting to influence adversely the growth and life of the ameba by flushing the intestine with various antiseptic solutions introduced per rectum. The results in many cases were gratifying, but in a larger number amelioration was only temporary,

* Read at the Eighth Annual Meeting of the American Society of Tropical Medicine, held in New Orleans, May 18 and 19, 1911.

and the pain which often attended this form of treatment, the difficulty of its administration and the invariable uncertainty as to how much of the flushing, if any, had really reached the seat of the disease, was a source of mortification to the medical attendant and of dissatisfaction to the patient. It is true that the majority of lesions are located in the sigmoid flexure and rectum, and intestinal lavage properly administered reaches these parts readily; but even when the lesions were chiefly aggregated low down there was always the probability of a few scattered ulcers existing at an inaccessible distance from the anus. These sufficed to negative all efforts for permanent cure, and a good proportion of cases drifted along with periods of improvement and relapse, finally ending in chronic dysentery and chronic invalidism, despite the empiric ipecac, salines, etc., with which they were nauseated and purged; despite the local treatment given with painstaking zeal.

Some of us who have suffered with tropical dysentery and have tried everything under the sun, administered at both ends, can give personal testimony as to the inefficacy of much treatment. But when the mechanical difficulties of introducing topical applications are considered it is not surprising that there are so many chronic dysenteries still unamenable to treatment.

The colon is a distensible, collapsible, membranous tube, about five feet in length, of large capacity, containing constantly fecal matter in motion.

The amebic ulcer is difficult to reach in its entirety by remedial solutions, by virtue of its peculiar morbid anatomy, its characteristic tendency to undermine the tissues, and its small opening into the lumen of the bowel.

As before stated, the sigmoid and rectum are the probable locations of amebic ulcers, the transverse colon rarely, but the cecum and ascending colon are the next favorite locations, with the ileum occasionally included.

It is considered doubtful by many men of experience in intestinal lavage if fluids can be forced beyond the transverse colon. Personally, I do not believe the flushing of the ascending colon and cecum can be accomplished per rectum. If this be true, it leaves a large class of cases to whose diseased intestine topical applications cannot be made.

The importance of tropical dysentery did not impress American

medical men until the Spanish War, and until we had acquired the Philippines as our possession. Our army and navy medical men, particularly, serving on shore in our over-sea possessions, were confronted soon with a large increase of cases. This is indicated in the carefully compiled statistics of Gatewood, of dysentery before and subsequent to the war. The admission rate of the navy per 1,000 of strength jumped in the force of the navy serving on shore from 1.1 in 1897 to 12.7 in 1898, and 23.9 in 1899, while there was no increase in the service afloat. This does not include the admission from other causes directly attributable to dysentery.

Army medical officers had even a larger number of dysenteries to treat, and their failures to cure by the old-established methods the large percentage of cases disabled for duty and for the service compelled them to try more radical methods, and I believe to them belongs the credit of first making common the practice of establishing a fistulous opening in the right abdomen for more thoroughly and efficiently flushing the large intestine. The appendix was first chosen as the medium of the fistula, but since then the cecum, colon and ileum have all been selected, and have their advocates. The results, I think, have been favorable in selected cases, and the operation is now universally employed, and is considered a distinct addition to the approved methods of treatment.

Manson, who until then ignored this surgical procedure, says of it in his last edition, relative to the treatment of chronic dysentery: "When less heroic methods fail, and the patient's condition is slowly but progressively deteriorating, right inguinal colostomy or appendicostomy should be offered as affording a reasonable chance."

Castellani and Chalmers say: "Very severe cases, involving the whole of the large bowel, and gangrenous cases, must be treated by appendicostomy and washing out of the bowel."

LeDantec (*Le Précis de pathologie exotique*, Paris, 1911) offers the operation in the fulminating type as the only hope.

Curl (*Annals of Surgery*, April, 1906), from a considerable series of operative cases at the Colon Hospital, Panama, is of the opinion "that, in intermediate cases, in which there is still a reasonable amount of strength, but where treatment is not controlling the dysentery, the operation of cecostomy with irrigation of the colon with quinin solution is indicated." Thus we have men of authority

in all parts of the world recommending the operation in all types of the disease, acute, subacute and chronic.

My own experience would seem to indicate that the operation is usually recommended only as one of last resort, and I believe that its earlier employment in steadily retrograding cases is indicated.

The operation is simple, easily performed, and if a fistula only be established there should be no mortality. I believe, too, that in cases where there is an extensive and severe involvement, cases where the cecum and the ileum are affected particularly, that the cecum or the ileum should be opened, a fecal fistula established, the colon placed at rest, except for irrigation, which, of course, could be established through the same wound.

The recent teaching of such distinguished men as the Mayos, Moynihan and others emphasizes the great importance of early diagnosis and early surgical intervention in ulcers of the pylorus and duodenum. The lamentable and fatal sequelæ following too prolonged an attempt to treat these conditions by diet and drugs alone, the added seriousness of operative interference when tardily undertaken inclines even conservative medical men at this time to favor an early gastro-enterostomy, which not only relieves existing discomfort and disability, but permanently cures these cases, and averts the dreaded sequelæ of malignant change, stenosis, perforation, hemorrhage and peritonitis. If early surgical interference is an approved procedure in ulcers of the upper intestinal tract, and I think it is so conceded, then we should consider, oftener, I think, than has been the custom in the past, early surgical aid for ulcers in the lower intestine, where they are equally dangerous, both in their immediate and remote effects. And in view of the fact that abscess of the liver, constituting one of the most desperate conditions in the domain of tropical medicine, always threatens the dysenteric, the amebic fuse that ends at the liver may be ignited at any moment.

Finally, while the operation of gastro-enterostomy requires a high degree of surgical skill and technic, the surgical operation for the relief of ulcers in the large intestine makes no such exhausting demands on the skill of the operator.

Where a simple irrigation is desired I prefer an appendicostomy. The appendix is delivered through a gridiron incision, and this can very readily be done under local anesthesia. The peritoneum

is stitched to the base of the appendix, and also a stitch is inserted through the muscles to retain the appendix in the wound. The muscles are united around the appendix, in forty-eight hours or as soon as adhesions are well established the appendix is amputated and a catheter is introduced.

In case an immediate irrigation is desired, as in the acute fulminating or gangrenous type, I would follow the method of Curl, who picks up the cecum through a gridiron incision and anchors it to the four corners of the wound caused by the decussation of the oblique muscles.

The advantages of appendicostomy are that there is less liability of leakage of feces, and consequently the troublesome skin irritation is avoided. The appendicular fistula, too, is more easily closed.

Right inguinal ileotomy or colotomy, I prefer to perform through a gridiron incision sufficient to deliver a bend of intestine, inserting a glass rod through the mesentery or mesocolon to sustain it while adhesions are forming, and to open the gut by thermo-cautery forty-eight hours later. By this method a convenient valve-like projection divides the two poles of the intestine. Care must be observed in getting sufficient separation of the muscles; otherwise sloughing of the intestine may ensue.

Stenosis is one of the most important sequels of dysentery, and when occurring is most commonly found, according to Cantlie, in the sigmoid flexure. It is due, of course, to cicatricial contraction of the healing ulcers. The symptoms begin with an insidious constipation, loss of appetite and nausea, with occasional colic and abdominal distention. In exaggerated cases there is a transverse abdominal tumor resembling intussusception. This latter, condition, too, has resulted from dysentery. The surgical treatment of stenosis is an abdominal section, a longitudinal incision in the bowels over the constriction, the breaking up of adhesions, and, if there is not too great an area of induration, stitching the bowels transversely will probably give sufficient lumen. In case the induration is extensive a resection may be indicated.

Perforation usually occurs coincident with abscess formation, and in its surgical features does not differ from perforative appendicitis or perforative duodenitis. That appendicitis may be primarily caused by the ameba has been dem-

onstrated by Musgrave and Clegg, who in a hundred dysenteric autopsies found fourteen cases of ulcer in the appendix, and in six cases the ameba was demonstrated. The abscess is not always diagnosed as being of dysenteric origin, though usually a second operation for the closure of a fecal fistula is called for.

In concluding this brief and imperfect presentation of the subject assigned me, I would like to summarize what I have tried to bring before you by two brief statements which I believe are incontestable and must attract the attention and receive the endorsement of every thoughtful observer.

1. Chronic dysentery of the amebic type is a malady of a serious nature, with far reaching consequences. The pain, the discomfort, the disability, and invalidism it produces are second to no other tropical affection. With its frequent sequela, abscess of the liver, it is one of the greatest menaces to the life of its victim. Medical treatment and intestinal lavage *per vias naturales* is often unproductive of benefit.

2. The treatment by surgical operation is simple, free from danger and not beyond the skill of a surgeon of reasonable ability. It should, therefore, be maturely considered whenever a fair trial of other procedures has led to no improvement of the patient's condition.

And by that I do not mean that a fair trial should be persisted in until the patient's exhausted state precludes the possibility of his enduring with safety this minor surgical procedure.

The Public Health Problems Concerned in Amebiasis.*

By J. A. WHITE, M. D., United States Public Health and Marine Hospital Service,
New Orleans, La.

True to the traditions of our race, we have fallen in line with our national kinsmen of England, Germany and France, and taken up the white man's burden, and, in so doing, one of the heaviest parts of the burden has fallen upon the medical profession in general, and the sanitarian in particular. I allude to the vast increase in our responsibility touching tropical diseases, and in this connection am glad of the opportunity to pay tribute to the wonderful and effective fashion in which that responsibility has been borne by our beloved ex-President, Col. W. C. Gorgas, in the American tropics, and my brother officer, Victor G. Heiser, in the Philippines.

It is probable that it would be unfair to say that the subject under discussion is a recent importation, but certainly the attention now given it is the result of its tremendous prevalence among our "Little Brown Brothers."

In undertaking any discussion of amebiasis from a public health standpoint, we meet, at the beginning, a serious obstacle to good work in the wide diversity of opinion touching pathogenicity, or the reverse thereof, in the different species of amebæ.

If, as claimed by at least one author, they are not pathogenic (Tanaka, in the *Munch. Med. Woch.*, 1910), then, properly speaking, there is no such disease.

If, as claimed by Musgrave, on the other hand, all amebæ are pathogenic, we are confronted with the problem of the sanitary control, not only of all dejecta, which is eminently proper in any case, but of the vast quantities of open water in ponds and slow running streams; in fact, exposed water of all sorts, everywhere.

The probability is very strong that the ultimate demonstration will be to the effect that one variety only is pathogenic, and it is also possible that this may be only so when the ground has been prepared for it by the presence and per-

* Read at the Eighth Annual Meeting of the American Society of Tropical Medicine, New Orleans, May 18 and 19, 1911.

icious activities of other agencies—i. e., that only tissues already undermined by bacillary action become the victims of amebic attack.

Though not wishing to claim any positive knowledge upon which to base such conclusions, this third hypothesis appears to me to present strong elements of probability, nor does the presence of *Entameba histolitica* in hepatic abscess militate against this idea, since the Shiga bacillus may easily be the means for effecting an entrance to the liver for the amebæ, and yet not elect to go there itself.

Von Ezdorf reports three cases of amebic dysentery on board a ship from South America with a crew of about 20 of whom no others were sick, although all used the same ameba polluted water supply, which seems strong testimony in support of the above conclusion.

Another and more important phase of the question to be considered, anterior to any decision regarding proper prophylaxis, is that of the natural habitat.

Is the human alimentary canal the natural habitat of the ameba? Do they originate in water? Are they primarily inhabitants of the intestinal canals of the lower animals, and, if so, which? So far as I am able to see, we cannot, as yet, answer definitely and positively, any of these questions. We find amebæ in the human canal, and we find them, or the strongest possible corroborative evidence of their existence in pools, shallow wells and slow running streams; in fact, in almost any easily polluted body of water, but who can say, absolutely, whether or not in any of these places they are to be classed as aborigines or merely casual visitors? It is **not** my province to discuss this portion of the subject any further than will be necessary to make clear what follows, and, in view of what has been said, I arrive at the following conclusions.

If a man is himself the source of infection, he will pollute, primarily through defecation, earth and water, and, secondarily, fruits and vegetables into which this polluted earth and water, singly or together, may come. Of the lower animals, should they be the source of infection, exactly the same thing

must be said. If water be the primary source of the infection, then secondary pollution comes about through the agency of animal life, principally man, as exemplified in the washing of vegetables with such polluted water.

The solution of a sanitary problem is somewhat different from questions of pure science handled by the investigators of disease. Those of us engaged in such work know that we must not look to the proven sources of danger, but must pay almost equal attention to any source which is under suspicion, be it only a barely possible source of contamination, and, such being the case, we must, of necessity, continue to consider that soil and water are both polluted, primarily, by man and beast, and that they, in turn, pollute our fruits and vegetables through contact in the manner above suggested. Throughout much of the South and most of the tropics, there is to be found a deplorable absence of any sanitary control whatsoever over human dejecta, the negroes on the Southern plantations being on a parity with the savage of the jungle in this particular matter, and many towns of considerable size, unprovided with any water supply, use surface privies which inevitably contaminate the soil in time. If soil contamination, by man or animal, occurs near any lake or pool or stream or well, it is a perfectly fair assumption that any organism present, with sufficient vitality to survive until the next rain, will find its way into that body of water, and if, in time, such water is used, and it certainly is, to wash vegetables and small fruits, it is easy to guess that the pathogenic organism in the water, whether amebæ or bacilli, or both, able to survive the conditions surrounding vegetables or fruit, will surely be carried back to the intestinal canal of man and the vicious circle thus completed. Hunters, fishermen and tramps directly drink such water as they find in pools or small streams. Rain water in cisterns has been found to contain amebæ, and in tall cisterns this will point to, though not prove, the presence of amebæ in the intestinal tracts of rats and birds, which, except for an occasional cat, are the only animals able to reach high roofs (of course, we know the cat is a host). Ordinary filtration does not cover the ground as a purifying measure,

because amebæ have passed through the Chamberland filter. Whether or not sand filtration by the Hamburg-Altona method might be effective, I cannot say, and I would like to hear an expression of opinion from the bacteriologists, upon that point. That it is effective for cholera, I have seen fully demonstrated; but we are dealing here with something entirely different from the cholera spirillum.

It is highly probable that the ordinary water pressure in a fixed water supply, amounting to seventy-five pounds or over, would be more than the amebæ could survive.

As having a bearing on the sources of infection, I shall give certain data furnished me by Dr. John D. Long, of the Public Health and Marine Hospital Service. He saw 114 cases of amebæ within a stated period in the Marine Hospital in San Francisco. Of these, 63 were of unknown or extraneous origin, and 51 became infected in the neighborhood of San Francisco. Amebæ were cultivated by Dr. Long from Lobos Creek, from water from the water tanks of the steamship *Mariposa*, from the Stockton City water supply, from a well in Oakland, to which Dr. Wellman refers, from water cresses growing on the banks of Lobos Creek, and from lettuce bought in the Oakland market.

That some of the amebæ developed were pathogenic Dr. Long deems proven by the fact that one of the patients was the owner of the well above referred to, and that another called attention to the fact that he was fond of water cresses and himself attributed his sickness to the eating of water cresses from Lobos Creek, which was subsequently investigated, with the results above given.

I understand that the City of San Francisco is making an effort to abolish the custom of fertilizing truck gardens by sprinkling with diluted human excrement, this custom having been much in vogue in the past with the Chinese gardeners, and being so prevalent in the Philippines, and in China itself, as to have practically put an end to the eating of raw vegetables.

Regarding the disease in the tropics, it behooves us to take a somewhat broader view of the question than if we were to

deal entirely with our own people, and in doing this, let me cite just one or two little matters to show the difficulties of the situation. On the advice that the Filipinos should boil their drinking water, some were persuaded to do this, but it was subsequently found that they regarded the boiled water very much in the light of a medicine, of which a cupful or two during the week would possess sufficient virtue, and again, this water was kept in a jar from which the family dipped the water with a cup, thereby each time wetting their fingers and pouring back that which they did not drink. And in connection with this one must remember that many of the natives have the habit of cleaning themselves, after defecation, with their bare fingers and a minimum of water, taking no trouble to wash their fingers afterwards. The natives in very much the same way as our negroes in the South make use of any secluded corner for defecation, with the natural result that the nearest body of water is inevitably contaminated.

An effort is being made in the Philippines to supply artesian or very deep well water in such an easily accessible form as to discourage, so far as possible, the general use of surface water, which is almost inevitably contaminated.

In a recent letter Stiles says:

"Whatever future investigations may show, present knowledge indicates that dry conditions are especially favorable for the sporulation of pathogenic amebæ. This seems to be a strong argument against the dry earth system of privy, especially since it has been demonstrated experimentally that if fecal material containing fly larvæ be buried, flies may still come to the surface. Assuming that these flies have had an opportunity to swallow the spores of pathogenic amebæ, it is easily conceivable that they may act as distributors of the disease.

"In its last analysis, the public health side of amebic-dysentery is identical with that of cholera, typhoid, hookworms, Cochin China diarrhea and other infectious intestinal diseases. It is clear that a successful campaign against amebic-dysentery must be based primarily upon a proper disposal of the fecal material. When we recall that of 4,822 American farm homes recently tabulated for about 200 localities in that part of our country where amebic dysentery may be expected to occur, 55.3% of these homes have no privy of any kind, and when we recall, further, that less than half of the country schools of the South, and very few of the churches, have any privy of any kind, it is clear that too much emphasis cannot be laid upon the point of building sanitary privies.

"The privy conditions of any given locality are a fair index of its civilization and refinement, for civilization presupposes a regard for human life, and refinement presupposes cleanliness.

To sum, up, then, it will be seen that the proper prophylactic conditions will be attained by the assurance, first, of a fixed water supply, under a good pressure, in all communities where this is possible, and in smaller communities, as near an approach to such water supply as can be secured, remembering to make access to water of a potable and safe character, easy in inverse ratio to the elevation of the people. Second, every means should be used to accustom the humbler classes to the use of a privy of the character constructed by Lumsden, Roberts and Stiles, regarding which, I have here only space to say that it is a very cheap, very easily cleaned, and a positively non-offensive modification of a septic tank.

There would then still remain the problem of the pools and streams from which infection might be obtained, the simplest solution as to stagnant water being filling and drainage, and it is my belief that such control of the surface water, coupled with the removal as above suggested of the causes that bring about fecal pollution to the soil itself, will, in a short time, do away with the infection of streams, as I understand to be the present fact in the Canal Zone.

Of course, I am well aware that, in dealing with an aboriginal people in the Orient, or with an exceedingly ignorant people, such as unfortunately abound in the country districts here at home, it will be impossible to at once accomplish all these results, so that in this, as in every other hygienic problem under heaven, the final solution is education, and not only education of the people, but of our own profession, who must do and advise all that is necessary and never demand of the laity anything that is unnecessary.

Too often does the tyro in sanitation overdo his work with the result that, through loss of public confidence, he cannot get necessary work done thereafter.

Again, we must carefully show the people the monetary loss involved in this and all other endemic conditions, because it is an undeniable fact that this kind of appeal is the most effective.

Over and above all things for permanent good in this, as in all other sanitary problems, then, stands education.

Lipomatosis of the Knee-joint.*

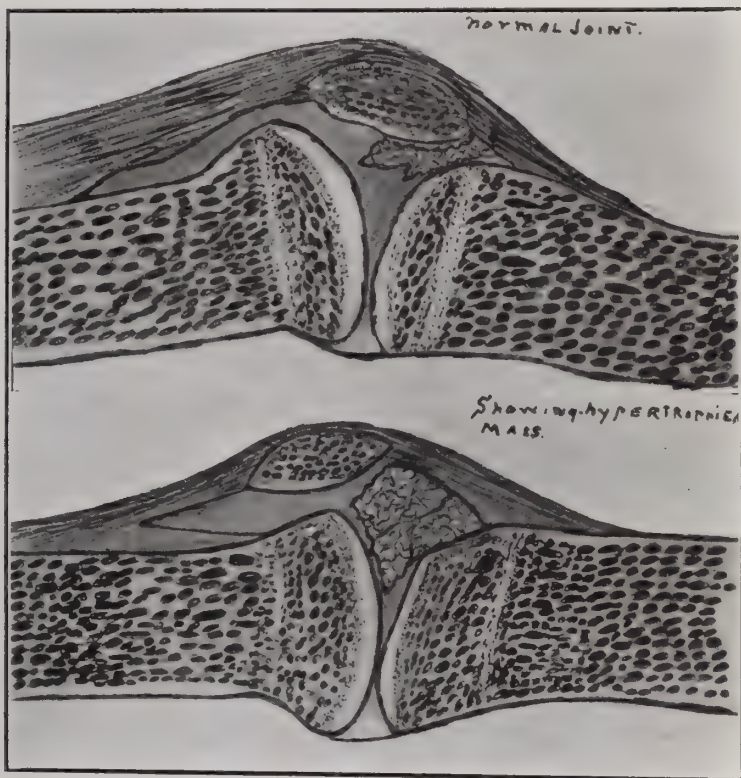
By P. A. McILHENNY, M. D., New Orleans.

Tumors found within the knee joint have been described by Müller, König, Hoffa, Goldthwaite and other surgeons, some of them as lipoma arborescens, and others as lipoma solitarium, and for quite a number of years these conditions were believed to be of tuberculous origin until Schuchardt, by his microscopical researches, proved that tuberculosis had nothing to do with them whatsoever. I am inclined to follow Hoffa's theory, and in the majority of cases I do not believe these tumors are true lipomas but a hypertrophy of the sub-ligamentous fat or ligamentum mucosum. In all normal knee joints there is a fold of the capsule running down from the ligamentum patellæ into the joint which contains a few ligamentous fibers and some adipose tissue; this peduncular wedge-shaped mass acts as a cushion or pad between the patella, femur and tibia when the leg is flexed on the thigh. This fatty mass may be the seat of an inflammatory process caused by a fall or some other trauma of the joint when it might have been pinched or mashed between the bones, or the inflammation might be the result of an attack of rheumatism or one of the arthritides; as motion is regained this mass is regularly pinched again and again till it becomes exceedingly hypertrophied, and almost any motion causes pain; in other words, a fibrous hyperplasia has taken place in the normal ligamentum mucosum which causes an actual mechanical obstruction to joint motion. According to König the lipoma solitarium is the result of some trauma effecting a slit in the synovial membrane through which the parasynovial or retrosynovial adipose tissue escapes into the joint, and he compares them to the subperitoneal lipoma. Hoffa, in discussing the subject, contends Müller's lipoma arborescens is no true lipoma, but simply an inflammatory fibrous hyperplasia of the articular adipose tissue, and he states further that this adipose tissue plays an important part in causing disturbances of the knee joint. His theory seems to me to be decidedly the most plausible, and the case I am about to present is a very good example of the condition as described by him. The symptoms differ considerably from other disturbances of the knee joint; with a gradual onset of attacks of sharp pains at increasing

* Read before the Orleans Parish Medical Society, July 10, 1911.

intervals, the joint becomes more and more restricted in motion; these pains may last for a day or two, or even a week at a time, when there will be a cessation for a few days, each successive attack being more troublesome than the others, till finally the patient is unable to flex the leg without pain, and in extreme cases complete extension is impossible. On viewing the knee it will appear larger than its mate, especially over the patella and its ligament. A characteristic puffy swelling is seen to each side of the ligament and the patella appears prominent or shoved up; the pain usually starts with a sharp twinge at the tibial head and runs upward and inward toward the quadriceps; in some instances it may be felt on the outer aspect of the joint as well; on palpation a spongy mass may be felt beneath the patella, which causes false fluctuation; it can also be felt beneath and to each side of the ligamentum patellæ. If the condition has existed for any length of time there will be an atrophy of the quadriceps extensor, probably from non use; there is never any local temperature or symptoms of inflammation. There is crepitation on motion, increasing with the size of the mass. A lateral X-ray view of the knee joint shows the patella elevated and a decided shadow beneath the ligamentum patellæ. With the accompanying drawings I have endeavored to illustrate how the condition appears to me.

Mrs. L. L. White, age 28, native of Louisiana, was referred to me at the Presbyterian Hospital Free Clinic by Dr. Hébert on February 16th, 1911. Family history good; father and mother still living. Previous history good except for an attack of acute articular rheumatism in 1909, which affected both hands, elbows, ankles, knees and left hip successively, and which confined her to her room for approximately nine months. She then gradually regained her strength and was able to get about fairly well till four months previous to admittance, when she began having pains through both feet and the left knee. On examination she presented marked pronation of both feet, with depressed anterior arches and an enlarged and painful left knee. On measuring, the left knee was found to be $1\frac{1}{2}$ inches larger than the right, but there was marked atrophy of the quadriceps extensor. The knee showed a puffy swelling to each side of the patellar ligament, pronounced on the inside, which felt like a thick pad interposed beneath the patella, femur and tibia; on pressure over the ligamentum patellæ



this mass gave decided resistance, and there was considerable pain caused which ran up along the inner aspect of the joint; also pain on motion, and motion limited to about 20 degrees of flexion. There was extreme pain on going up steps except when taking one at a time. The pain had been severe for the past week and seemed to be increasing. She had had her knee treated with active hyperemia and massage by a professional masseur three times a week for six weeks, without benefit, so I decided to treat the foot conditions first, and by relieving them take the strain off the knee joint. Her feet was strapped from February 16th to March 7th, when steel arches were built for her which relieved the pronation and depressed anterior arches, but the knee condition remained unaltered. An X-ray taken of her left knee showed a decided shadow below the ligamentum patellæ which confirmed my diagnosis of fatty tumor. On account of her having experienced no relief from baking and massage, I advised an immediate operation to remove the mass, and on March 20th she was admitted to the hospital and operated upon the next day by me with Drs. Parham and Hébert. A curved incision was made from the internal tuberosity of the tibia to the quadriceps tendon, and, after dividing the underlying structures, the joint was opened; the patella was elevated and partly dislocated outward and a triangular pedunculated shaped mass, glistening in appearance, was then found hanging down from the ligamentum patellæ into the joint cavity; the capsule was partly adherent to the condyles and the cartilages of the femur and tibia were slightly eroded, showing the results of the rheumatism; the mass was grasped with forceps and clipped loose from its attachment to the ligamentum patellæ, the capsule was freed from its abnormal attachments, the joint washed out with saline solution, deep and superficial sutures put in and the joint closed without drainage; a posterior gutter splint was applied, and on the fourth day passive motions begun. The sutures were removed on the seventh day, when active motions were encouraged, and the patient discharged from the hospital on the eleventh day. Massage and active and passive motions were given daily for about three weeks, when the patient was able to walk without pain and could flex the leg beyond a right angle. On examining the mass it was found to be about the size of a pigeon's egg, of a firm though spongy consistence, and of a pinkish red color. The microscopical findings, for which I am indebted to

Dr. Harris, show bundles of fibrillar connective tissue which in places are symmetrically waved. Between these bundles are fat spaces bridging the interfibrillar spaces; these fat areas vary greatly in size and shape and have no definite limiting capsule. In an area of connective tissue hyaline degeneration is seen and scattered in the same area are a few lymphoid and plasma cells. These masses are usually very vascular, and if excised during an attack or immediately after, show the vessels engorged with blood and the whole mass appears a deep red or red-brown color. If seen early there is every reason to believe that they may be dissipated with baking and massage, but the old cases demand operation in order to obtain permanent relief.

Hypertrophy of the Prostate: Its Surgical Treatment.*

By CARROLL W. ALLEN, M. D., New Orleans.

The prostate is a musculo-glandular organ and in reality is composed of twin organs or lobes, which are distinct in fetal life, but unite later by a blending of their capsules; the so-called middle lobe does not exist as such, but is an outgrowth from one or both of the lateral lobes. The two lobes are held together loosely on their inner aspects and grooved for the passage of the urethra and ejaculatory ducts.

Each lobe is covered by its true sheath or capsule, which is intimately connected with it and impossible of removal, as it blends with the tissue within. The prostate is further surrounded by a second or false capsule of dense fibrous tissue, an outgrowth of the recto-vesical fascia; this forms the bed of the prostate and contains the prostatic plexus of veins. The ducts and glands of the two lobes do not communicate. The ducts of each side pass forward to empty on the floor of the urethra near the veru montanum. The enlargement of the prostate is due to an increase in its adenomatous tissue. As its bulk increases, the growth is in the direction of least resistance, and, after distending its false capsule, bulges backward and upward into the bladder around the urethral opening, where the false sheath is deficient in development; the muscles of

* Read before the Orleans Parish Medical Society, July 10, 1911.

the bladder wall which covered this region are so thinned out and attenuated, that finally the vesical portion of the prostate is covered only by the mucous membrane. Oftentimes these apparent simple hypertrophies are found on examination to be malignant; this is more often the case than is suspected. These malignant processes are usually of very slow growth and do not break through the capsule and invade the surrounding tissues until late in the disease, consequently the enucleation of the gland is sufficient to accomplish their radical removal.

The etiology of enlargement of the prostate is still in doubt; several views have been expressed, but none universally adopted. It has been claimed that it is due to a sclerotic process first starting in the arteries of the part; another view is that it is an adenomyomatous hypertrophy, somewhat analagous to fibroids of the uterus. Many believe that it is due to the earlier infections of the prostate from gonorrhea and other causes setting up irritation which in time produce hyperthrophy.

The symptoms usually come on gradually in frequent and difficult urinations, becoming more marked at night, often excited or aggravated by taking rich, highly-seasoned or peppery food, alcoholics or sexual indulgence, which produce congestion of the organ, sometimes so great as to exclude the urethra and produce retention. Hemorrhages frequently occur, and sometimes cause much distress by the accumulation of clots in the bladder. The bladder, unable to empty itself, retains part of its urine in the bas-fond which develops behind the prostate; this constantly retained urine easily becomes septic, producing cystitis with its train of symptoms.

Medicines exercise no influence upon the hypertropic process, but urinary sedatives and antiseptics do much good, particularly the latter, by preventing or holding in check the cystitis which always occurs sooner or later in these cases. Massage has been used, but, aside from temporary relief in subduing the congestion, does no good.

Electricity has its advocates. The galvanic and high-frequency currents are the two forms used. The first gives but transient relief, through the decongestive influence of its positive pole. The high-frequency current, while more lasting in its effects, is yet uncertain and has to be long continued; some cases improve

markedly, but are subject to a recurrence of the symptoms when the treatment is discontinued.

Of all the simple means of treatment at our command the catheter is the most effective, but has its dangers and limitations. When skillfully and aseptically used it is the best of all palliative means. The greatest care in cleansing the glans and anterior urethra should be practiced. The anterior urethra contains organisms which are pathogenic to the posterior urethra and should be carefully syringed out after first washing the glans with soap and water. If any trauma of the deeper parts is produced in passing the catheter, by setting up a point of least resistance, it offers a ready avenue of entrance to organisms already in the urine.

The use of a syringe full of cocaine solution with a few drops of adrenalin relieves the pain contraction and congestion of the deeper parts and often permits the passage of a catheter much more easily than could otherwise be done. After emptying the bladder it should always be washed out with some mild antiseptic solution. Occasionally more lasting effects are obtained by allowing the catheter to remain in the bladder for from twelve to twenty-four hours, providing it does not cause irritation.

The catheter placed in the hands of the patient is a dangerous instrument; his lesson in its aseptic use is soon forgotten or neglected under the dire strain or urgent necessity and infection follows. In past years, before prostatectomy had reached its present stage, in casting about for some means of relief for these sufferers, it was observed that in those who had been castrated atrophy of the prostate followed; it was accordingly tried, and, while it frequently accomplished its desired end, the victims were often more miserable than before and many terminated their days in asylums. The same end was later attained by vasectomy, but this, too, has been abandoned.

The Bottini galvano-cautery held sway for a time, and is still used, though less than formerly; in the hands of skillful operators it yielded fair results. With the advent and perfection of the cystoscope has come a great aid in all bladder and prostatic examinations, and it should always be used, when possible, before operation.

The surest means of relief, and in the end, often the safest, is the radical removal of the hypophrosied organ. With the present

improved technic the mortality is no greater than that associated with any other major operation upon patients at the same time of life and in similar conditions of health.

THE RADICAL OPERATION.—A large catheter is passed into the bladder, which is freely irrigated and the catheter allowed to remain. An incision three or four inches long is made over the suprapubic region, its lower end terminating over the pubic arch; this is carried down to the recti muscles, which are separated; the prevesical fat and peritoneum are pushed up out of harm's way and the bladder comes into view, which is recognized by the large veins coursing over its surface; before opening the bladder it is well to secure it with traction sutures passed through its surface. The bladder may previously have been distended with fluid to render it more prominent or a staff used to push it up into the wound. An incision two inches long is then made through the bladder wall, which is frequently much hypertrophied and thickened in these cases. The fingers are then passed into the bladder, and fluid which it contained gushing up through the wound. I prefer now to use long-bladed narrow retractors, one on each side, passed into the bladder, and its walls separated, when after sponging out any fluid that remains free inspection is permitted of the entire vesical cavity, the condition of the prostate noted, calculi, diverticuli or other abnormalities readily seen and properly dealt with.

The retractors are now withdrawn to allow freer access for the fingers and the enucleation of the prostate commenced. An opening is made on either side of the urethral opening with either the finger or scissors and the finger passed down to the prostate; with one or two fingers of the other hand in the rectum the prostate is lifted up and made more prominent in the bladder. The dissecting finger is now passed over the surface of the prostate in all directions, separating it from the overlying mucous membrane; passing forward the false capsule or sheath is encountered at the edge of the bladder, the finger passing inside of this progresses forward towards the apex of the gland and is swept forward and backward in all directions, effecting free separation of the gland. As the separation progresses the interval between the two lobes becomes more apparent, the urethra containing the catheter is readily made out in the median line and usually in its anterior portion separated from the gland. Any bands of tissue still hold-

ing the lobe are now broken and the gland removed; usually the two lobes come away separately, but may come away together. The vesical end of the urethra usually comes away with one or the other lobe, breaking across posterior to the verumontanum. When the lobes come away separately each is dealt with in a similar manner.

During the process of removal hemorrhage is usually profuse, but soon ceases; the enucleation should be progressed with boldly and quickly until the gland comes away. After removal the bed lined by the false sheath will have been found to have contracted until the walls are nearly in apposition, this approximation of the edges of the wound is further facilitated by manipulation of the fingers in the bowels and bladder. Free oozing can be checked by passing in a sponge dipped in hot water, or irrigating for a few minutes with hot water; if packing is resorted to, which is safer, a Mikulicz pack will be found most satisfactory, previously withdrawing the catheter from the urethra to allow its more ready approximation to the walls of the wound.

The bladder is now washed out through the suprapubic wound and we are ready to close. A large drainage tube about one inch in diameter is passed into the bladder, one end of the pack may be drawn up through it to allow of its ready removal or a stout piece of silk previously attached to it answers the same purpose. A few deep stitches, preferably of silkworm gut, suffice to approximate the wound around the drainage tube. A large absorbent dressing is then applied and held in place with a many-tailed bandage and the patient returned to bed.

The after treatment is one of the most important details for the success of these cases. For the first twenty-four hours the dressings must be changed as frequently as soiled. After twenty-four hours free irrigation of the bladder should be commenced and unless oozing of blood is still free the pack removed. These irrigations should be repeated twice daily, at first through the suprapubic tube, after the second or third day through the urethra, when a catheter may be passed for this purpose and left in place for drainage. A Pezzer catheter may, in addition, be passed through the large suprapubic tube to further aid in drainage and assist in keeping the dressings dry.

It is necessary that these patients have a great deal of water to

flush the kidneys and bladder, which should be commenced as soon after the operation as the stomach will permit.

After the third or fourth day the patient should be gotten out of bed into a rolling chair, and if possible taken out on a gallery or into the fresh air. This is very important, particularly with old and debilitated patients who stand confinement in bed badly. Generally, by the fifth or sixth day, the patient is able to move about sufficiently to be gotten into a tub and given a full bath; this repeated daily greatly helps their convalescence. By the end of the first week, or sooner, the large suprapubic drainage tube is replaced by a small one. The catheter in the urethra should not be allowed to remain longer than five or six days without being removed and giving the urethra a rest for twenty-four hours, when it can again be inserted. The bowels, of course, should be kept open daily. The diet, at first bland liquids, is soon increased to soft food, and by the end of ten days the patient should be back on his regular diet. The suprapubic tube is removed in about ten days and the wound allowed to close.

Full-sized sounds may be passed at intervals of every ten days for about two months following operation. The results obtained by this operation are usually excellent, the patient is able to void his urine as well as he ever did. Strictures of the neck of the bladder have never resulted and there is usually no diminution in the sexual power. This, however, is usually failing or absent at this time of life, and consequently the operation does not restore it.

In cases that present themselves for operation with badly infected bladders, it is well to drain the bladder by a suprapubic incision for a few days to one week before attempting the removal of the prostate. This preliminary procedure puts the patient in very much better condition to stand the later operation; the sepsis is removed and the frequent urinations, sometimes ten to twenty at night, with the attendant straining, stopped, securing uninterrupted refreshing sleep. A case illustrating the two-step operation is the following:

Mr. N. T., aged 67, had been suffering for the past ten years with enlargement of the prostate, urination very frequent and with much straining; had to urinate from twelve to fifteen times at night; urine at times cloudy. Had several attacks of retention, averaging about once a year; on one occasion the bladder had to be

tapped, but catheterization was usually successful and afforded relief. The last attack of retention occurred July 24th last, accompanied by hemorrhage from the prostate and was ushered in by a chill followed by fever. Catheterization gave but partial relief, as it could not remove the clots; the condition became rapidly serious, temperature going to 106°, with delirium, and on July 26th the bladder was opened suprapubically under cocaine, evacuating a large amount of septic urine and blood clots. The sepsis and temperature rapidly disappeared and the patient went home with the suprapubic wound open. He felt so comfortable that he did not return for a radical operation until after one month's delay. As his general condition was good a general anaesthetic was administered and the prostate was removed by the technic already described. His progress after operation was uneventful. He was able to return home in ten days. He is enjoying life now with no more urinary troubles, voiding easily with no pain or effort and rarely gets up at night.

Infantile Diarrhea, Fermental Diarrhea; Causes, Symptoms and Treatment.*

By DR. JOSEPH W. GREGORY, Assistant Health Officer, Upshur County, Texas.

In asking indulgence for a short while in presenting a few ideas upon this subject, we do not expect to add to that which has already been written on this well known variety of diarrheas. We will not attempt to classify this malady under the various heads as described in our text-books, but will offer a few suggestions on the variety commonly seen—to wit, the dyspeptic or perverted digestion variety. The prime cause of these diarrheas is attributable to the mal-assimilation of food; hence, we classify under this head.

The subject of infantile diarrheas has always been one of intense interest to the physician whose duty it has been to deal with them. The honest doctor who feels for the welfare of these tender little buds, in directing the best and most practicable methods for their future development from infancy to sturdy man and womanhood, will agree that no affection of childhood gives to the medical man

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more worry than this class of infantile diarrheas. Statistics bear us out that these bowel disorders in the very young, with their usual complications, carry away more of these little patients than any other class of diseases peculiar to infant life. Infants under the age of thirty months are prone to diarrheal disorders. These troubles foster and flourish during the late spring and summer months. Dentition plays an important role in their cause. The writer, after having a few summers of unpleasant experience with this arch enemy to childhood, began to direct his attention to the causation and subsequent results of treatment, and after some careful investigations into the history, pathology and etiology of these cases, we concluded that the profession had fallen far short of achievements that might have been attained should these conditions have been the subject-matter of more sincere research work at the hands of our profession. Our text-book authors have passed the subject by with little mention. Volumes have been written on how to do an appendectomy in the fewest possible moments, or decapsulate the kidney for nephritis, etc., but few paragraphs we find in our standard works on practice on that monster disease of childhood that snatches from the bosom of a proud parentage more babes than numbers of other diseases combined. It is now known that improper feeding of these children is the cause of this class of troubles. Healthy breast-fed infants are almost immune from this disorder. Authorities agree that only 3 per cent. of breast-fed children fall victims to bowel troubles. Just here we desire to digress to condemn in strong terms the popular fad as practiced by our society women who are so unnatural as to refuse their offspring the God-sent privilege of suckling her breast, and use some stratagem to dry up the mammary glands, substituting the dangerous bottle, which furnishes the choicest medium through which to convey diseased germs and toxic material into the intestinal tract of her child. The practitioner who knows his duty and refuses to condemn this practice among the women who expect him to advise them along educational lines, falls far short of doing his sacred duty. His duty is not only to cure the sick, but he should also teach prophylaxis.

As already stated, artificial feeding is the cause of infantile diarrhea. No article of diet appears to be so readily contaminated as cow's milk. It affords an excellent culture medium for almost

all forms of bacteria. The nurse prepares the milk for the infant without any regard to cleanliness or hygienic measures, using the rubber nipple and container without sterilizing at each feeding time. The child thus becomes diseased. The doctor often fails here to throw the proper stress on the importance of cleansing everything that the child has to do with. In the healthy breast-fed infants the defecation from the bowels is of a smooth homogeneous nature, of semi-solid, dull lemon color, and not of an unpleasant odor; reaction, acid from the fatty acids contained. The diagnosis of fermental diarrheas then is manifestly easy. The indigestion of the child's food being the prime cause of these disorders, we have classed them as the dyspeptic variety, which classification seems to be justifiable when the frequent ingestion of substances known to be inimical to the normal digestion of the infant's stomach is recalled. This condition, arising from functional derangement of the digestive tract, we will deal first with the milder form, or the acute attack; under this division we usually have the following symptoms: the diarrhea follows after a few days of general malaise, fretfulness and slight pyrexia. It comes on suddenly, with more or less large fluid motions containing fecal matter, traces of blood and undigested material. In some cases, unlike the above, we have symptoms of gastric irritation, abdominal pain which precedes the diarrhea some hours. Examination reveals a moderate amount of fever, 100° to 102° F. In these acute and mild attacks the temperature never runs over the 102° point, except in severe gastric disturbances. The abdomen is usually slightly distended and rounded toward the median line. The stools are frequent, thin and usually sour smell. When the odor is sour we have the condition of acid fermentation. When fetid and very offensive, the albuminous decomposition, the color is pea green, with traces of mucus, and in the ill-nourished breast-fed infant the discharge from the bowels is usually also of this peculiar shade. We have often heard the anxious mother, ignorant of the impending danger to her babe, say the child's bowels are acting well, expressing hope in her babe's recovery, saying she had administered oil or teas and the bowels were thus acting.

We will outline our methods of treating the acute cases from a food and therapeutic standpoint. The correction of this condition depends much upon artificial feeding. There

is no subject in medicine of which it is more difficult to lay down satisfactory rules to govern all cases than artificial feeding. Eschrich lays down the following rules, recognizing two well-known forms of intestinal fermentation, the acid and the alkaline. If there is much decomposition, with foul stools, the albuminous articles should be withheld from the diet, and the carbohydrates given, such as dextrine foods, sugar and milk, which, on account of its sugar, ranks with the carbohydrates. If we have acid fermentation, with sour, but not fetid stools, an albuminous diet should be given, such as broths and egg albumen. Believing the foregoing rules worthy of consideration, we have of recent years adopted Eschrich's principles. If our case is one of acid fermentation we give egg albumen, prepared by a simple method. The whites of two eggs are stirred in warm sterilized water, about a pint, seasoned with salt, and a little brandy is added to flavor. A remarkable improvement of the child fed in this way every one or two hours is soon noticed. Beef juice is also excellent, given alternately with the egg albumen. Boiled water cooled to toleration should be given at frequent intervals, with a small quantity of corn starch. In the albuminous variety we give starch, sugar and sterilized fresh milk and fruit juices. Hygienic measures are not lost sight of. If the pyrexia runs to 102° F. we direct a warm bath, containing a small amount of bicarbonate of soda to aid in cleansing the pores of oily excretions. The cause being one of perverted functional digestion we usually begin therapeutic treatment by hastily getting an evacuation of the bowels, ridding the alimentary tract of any fermenting material by giving minute doses of calomel and ipecac, followed by castor oil. High rectal irrigation with sterilized warm water, containing starch or boric acid, is used. This little operation is best done with a soft rubber No. 10 catheter, which can easily be carried in the emergency bag. Attached to a fountain syringe, using from six to ten ounces, elevating the hips and allowing the enema to remain as long as possible. Two enemas during the twenty-four hours are sufficient. If there is much tenesmus we give paregoric in combination with Resor-Bisnol. It is a safe preparation containing the proper agents, well blended, to take care of the abnormal conditions existing in the alimentary tract. The fermentation and irritation are quickly checked and the patient begins an almost remarkable convalescence. An emulsion is usually

prescribed containing Fairchild's Essence of Pepsin. We give it in doses to suit the age and severity of the case every three to four hours. These little patients improve rapidly, the diarrhea ceases and the bowels resume a healthy motion.

We come now to deal with a more severe type of this malady, and will describe it under the caption of a post acute variety. In our *modus operandi* in dealing with this variety of diarrheas we cannot hope for such results as in the acute form. Often we are not called in time to prescribe for these patients until the case has developed into a most serious stage. We will attempt to describe a case of this serious type as seen at the bedside. The pyrexia runs high, often 103° to 105° F., with nervous symptoms manifesting themselves in twitching of the limbs, prostration, wakefulness, head rocking, anxious facies; flabby tissues, depressed fontanelles, sunken lustreless eyes, with drawn features; the abdomen assumes a flabby feel, the extremities become cold, and within twenty-four hours the algid stage is reached with pallor. The restlessness changes to stupor and an irritable state when disturbed, but rapidly subsides into semi-coma with shallow breathing, collapsed veins, half closed filmy eyes, and terminates by convulsions or coma. In the last described class of cases we are often inclined to diagnose them as cholera infantum, but by careful investigation into the history of these cases leading up to this serious termination, we often obtain a true clinical picture of a once mild attack of intestinal perverted functional disturbance resulting in these unhappy symptoms. Another reason we feel safe in saying our diagnosis is erroneous often when we call this type of the disease cholera infantum, is that, according to the best authors, it is not often met with. So far as ante mortem clinical evidence goes, cholera infantum may be considered an intense form of acute gastro-enteritis, or a dyspeptic diarrhea plus some unknown intoxication. The best clinicians we have any knowledge of upon these classes of diseases have failed to draw satisfactory and well-defined lines between cholera infantum and dyspeptic diarrhea. Cases presenting all the symptoms of so-called cholera infantum from the sudden onset of vomiting to the serious diarrhea seem to yield to treatment. We believe the tendency is to restrict the diagnosis of cholera infantum to fatal cases only, and often the fact is lost sight of by many practitioners of the clinical conditions found early in these cases.

In the routine practice with this serious type of diarrheas we usually follow in part the plan of treatment outlined in dealing with the mild form, but more stress is thrown upon rapid stimulation, supporting the nervous centers and restricting to a thorough antiseptic liquid diet, using Mellin's Food or Horlick's prepared milk. Aconite to control rapid circulation, cold packs for fever, normal salt solution for extreme collapse per rectum, are all useful.

Onion for Dropsy.

By DR. E. M. DUPAQUIER, New Orleans.

This is no joke. The unfortunate who, from some cause or other, have dropsy can now try the onion cure. Wherefrom the onion derives its powerful diuretic effect, so far nobody can tell; but chemists and physiologists are alert, and we shall soon know why and how.

We all know that onion will more or less cause a flow of fluid from the eyes; why should it not from the kidneys? At any rate, it is a fact that onion, and chiefly the white onion, has cured dropsy. Dr. Mongour would not believe it at first, but he now hesitates, for he reports in the "*Gazette hebdomadaire des Sciences Médicales de Bordeaux*" a cure, or at least a great amelioration of cirrhotic ascites by onion feeding.

He had exhausted all remedial measures in the case of a lady, and finally he gave the case up. The lady went to an "*herboriste*" (herb-vendor), who at once, without hesitation, told her: "*Mais, ma chère Dame, c'est tout simple. Mangez des oignons; autant que vous le pourrez, et surtout des oignons blancs.*" (It is very simple, my dear lady; eat all the onions you can, and especially white onions.)

The lady was from Bordeaux, the center of a district where onions grow beautifully and are very tasteful. She took on the suggestion, and fed on onion. The result was that her surplus of water was emptied in a short time, and she had the laugh on the doctor.

The latter told this to his fellows he met on his rounds, and the whole medical fraternity gave onion for dropsy. The result was

invariably astounding, so that onion is now looked upon as a great diuretic—at least in the onion district of France, once of the Province of Gascony.

Of course, one must like onion to take it; so the first contraindication is individual, as usual. Next, onion may affect the stomach more than it would the vasomotor system, or the epithelium of the kidney; again this is individual. But one thing is certain—that it makes some dropsical individuals urinate to such an extent that they run dry.

The mode of administration is simple enough, *per os*, taken raw. The dosage, unlimited, regardless of surrounding conditions.

It is with unmitigated delight that we figure on the blessings of onion, as physicians and citizens. Indeed, as soon as this great virtue of the onion becomes known to the general public the doctors, the dropsical, the farmers, the proprietary medicine magicians, will all join in praise, for the doctor will have a new thing to give, the dropsical a new thing to try, the farmer a new culture to *diversify* his crops, the proprietary medicine magician a new field to harvest, and with that the onionphage and the onionphile will grow to such a number that, to be protected against abuse, the faithful will band in onionism, and the blessing of it all will be finally one day a general strike of *onionists*. Amen, and, out of relief let us sneeze in chorus.





One of Nature's Perforations of the Drum Membrane.

Louisiana State Medical Society Proceedings.

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DR. JOSEPH D. MARTIN, Chairman, 141 Elk Place, New Orleans, La.

THIRTY-SECOND ANNUAL MEETING.

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Tympanotomy, Its Indications and Its Technic.

By DR. HOMER DUPUY, New Orleans.

Tympanotomy—incision of the drum membrane—is one of the most satisfactory procedures in modern surgery. It is so simple in performance and is productive of such brilliant results, that it really deserves to be more thoroughly understood and popularized. It is beyond all doubt lifesaving and hearing saving. We can only appreciate the marvelous results which follow its performance when we rid ourselves of the barnacled idea that to perforate the ear drum means to sacrifice the hearing. The answer to this is based on hundreds of observations which justify the deduction that, when nature perforates the ear drum, she does so by means of a slough. Nature may come to the rescue, but too often does her work at the expense of the hearing. The perforation is of such diameters or is so situated that its closure becomes impossible. It is not the mere perforation, therefore, which is harmful, but too frequently it is its size which leads to perpetual ear trouble.

Previous to perforation the middle ear structures are bathed in fluid—serous or purulent in nature. If spontaneous evacuation is too long delayed, there is constant exposure to the more serious intracranial complications which threaten life itself; or, should this not prove the outcome, there is a distinct influence on the auditory apparatus. But a timely tympanotomy under proper conditions may and does save both life and hearing. With improved methods of diagnosing ear trouble and with rational surgical measures of relief, we cannot escape the indictment that someone is to blame for many of the lives sacrificed and for many hearings destroyed by an abscess of the middle ear.

Modern otology is amply equipped to anticipate nature's perfor-

ations by a timely incision of the ear drum, and herein our duty lies.

INDICATIONS.—The intelligent use of a ear speculum—the watch test and pressure applied at different points over the auricle and mastoid process will furnish reliable data in differentiating between a middle ear affection and one centered in the external meatus. Subjective pain in and about the ear, a reddened and bulging ear drum, the watch not heard on contact, rise of temperature and pain on pressure directly over the mastoid, form a group of cardinal symptoms which point to acute otitis media and which unmistakably call for immediate tympanotomy. These are the usual phenomena present in every instance of severe middle ear infection, those especially of streptococcal and grippal origin. These symptoms are not all invariably present in every acute inflammation of the middle ear, but when they are, they constitute danger signals pointing, not only to actual trouble in the ear, but to impending disturbance in the mastoid. Now that we recognize the antrum of the mastoid to be an accessory cavity of the middle ear, continuity and contiguity of parts render it anatomically impossible that in virulent infections the antrum should escape inflammation. Trouble once lodged in that cavity, avenues open up for possible extensions towards the mastoid cells, to the brain or lateral sinus. With a recognized acute otitis media, pain on pressure directly over the mastoid, especially at a point corresponding to the supra-meatal triangle indicates involvement of the antrum. Tympanotomy is then urgent and frequently means prevention of an extension from the antrum to surrounding structures.

Pain is the most constant symptom and should lead us to perform tympanotomy when, despite local and general remedial measures applied for a period of twenty-four hours, it persists in intensity. Violent pain in acute otitis media is always associated with marked disturbance of the hearing and furnishes another reason for early incision. Temperature is not always a safe guide, as there may be a sharp rise with only slight local disturbance, while on the other hand, the middle ear and mastoid antrum may be filled with pus and yet the temperature remain normal. It cannot be too strongly emphasized that in very young children elevation of temperature persisting for several days may be the only reaction accompanying an acute ear suppuration. Incision of the drum is especially indicated, for the removal of pus prevents

ankylosis in the articulations of the auditory ossicles and thus protects the hearing.

In the watch test we find valuable corroborative evidence. Profound infections without exception show marked, if not total, loss of hearing to the watch. Even in the less virulent affections the hearing may be greatly altered. The indications in this class of cases for a tympanotomy are not so clear cut. Nothing is lost, however, by having recourse to such measures as inflation of the ear by means of Politzer's air-bag or inflation through the eustachian catheter. Should such procedures fail to improve the hearing, say, within a week, it is eminently good practice to evacuate the serous or pus accumulations by a tympanotomy. It cannot be stated too strongly, as a further argument in favor of this operation, that the opening resulting from tympanotomy, except in the rarest instances, seldom fails to close and under proper after treatment with full restoration of the hearing.

TECHNIC.—Tympanotomy now means to the modern otologist a *free incision* with a properly shaped knife. To secure the best drainage, both for the mastoid antrum and the middle ear, the line of incision should run in the posterior half of the eardrum, and, by following the contour of the drum, should be crescentic in direction. The incision should begin at a point on a level with the floor of the external meatus and run up so high that the line of incision will include the upper and inferior posterior segments of the eardrum. So as to insure a thorough opening, the knife is further gently passed up and down, with a sawing motion, on the line of incision, at some depth in the wound. Such an incision secures the best possible drainage, both for the middle ear and the mastoid antrum.

It must be admitted that by reflected light this operation is greatly facilitated, and is, in fact, necessary for its ideal performance, but in the absence of a speculum and head mirror, or if there be inability to illuminate the parts from want of practice, by following the posterior wall of the external meatus we unmistakably reach the posterior segment of the eardrum. This is especially adaptable in infants and in very young children, in whom, inspecting the eardrum even through a speculum, may prove most difficult, if not at times impossible.

Place the patient prone on a bed or table—the head turned around so that the patient will be lying on the unaffected side,

with the ear to be operated directly before the operator. Pull the auricle outward and forward, which straightens and enlarges the meatus; then let the knife slowly and gently follow the direction of the posterior meatal wall—which is inward and backwards—being careful not to engage the knife in the wall itself. When at a depth of about 24 m. m. the eardrum will be encountered; the peculiar resistance offered by it is easily appreciable. At this point plunge the knife into it and carry the incision upwards, after which, without removing the knife from contact with the parts, it should be moved upwards and downwards without much force and with a sawing motion.

Tympanotomy offers but little success, and is frequently impossible, except when performed under some local or general anesthesia. I have used such solutions as the following: Cocain, menthol, carbolic acid combinations, also cocain, alcohol, and aniline oil in combination for local anesthesia, they have generally proved unsatisfactory in the acute inflammations of the middle ear.

In the infant and very young children tympanotomy can be performed without anesthesia. But in a child of three years, and in the adult, a general anesthetic is not only justifiable, but positively necessary, for anything like adequate work. After all, when we consider that this operation, while simple in performance, is intensely painful, and that, unless one be Spartan-like, involuntary movements on the part of the patient will occur. This is regrettable and preventible. The use of a general anesthetic solves the problem and is especially serviceable when the operator is not so experienced, as it affords time for careful attention to details in the use of the ear speculum, with a reasonable prospect of seeing and incising the eardrum at the point of selection.

Tympanotomy, particularly in a virulent infection of the ear, with impending trouble in the mastoid, is beyond all doubt life-saving and hearing-saving. The indications for general anesthesia in just such cases are so clear and urgent that it savors of positive malpractice not to apply it so as to secure the best possible results.

Finally, when we consider the anatomical position of the middle ear, its proximity to the brain and other important structures, its psychic and economic importance as the organ of hearing, we are forced to the conclusion that, in the suppurative forms of acute otitis media, "*any old incision*" is better than none at all.

DISCUSSION OF DR. DUPUY'S PAPER.

DR. L. R. DEBUYS, New Orleans: I think Dr. Dupuy should be congratulated on his excellent paper. There is nothing that strikes closer to me than the ear complications in children. It has been my fortune to see persistent temperature in children, more particularly several years ago at the Boston City Floating Hospital, where the intestinal cases are treated. The cases would show recovery from the gastro-intestinal condition, yet the elevation of temperature would persist, and when the temperature persisted we always examined the ear, and the lesson I drew from that was that in every examination of a baby, where there was a febrile condition, the ear should be examined as a routine. In other words, that should be incorporated in the physical examination.

So far as injury to the hearing is concerned, I have seen many of these operations on babies for middle-ear trouble, and I do not recall ever having seen any permanent injury to hearing.

In connection with the anesthetic, I do not know that I can agree with Dr. Dupuy altogether. A great many cases of otitis media are complicated by respiratory conditions, and under these circumstances I think the danger of the anesthetic is to be deplored more than the inconvenience of the patient.

I think Dr. Dupuy's explanation of the incision is very lucid indeed.

DR. ARTHUR I. WEIL, New Orleans: I think not only the essayist, but the Society, is to be congratulated on his explicit description of the indications and the technic of tympanotomy. No one is in a better position to judge of the value of such an operation than the ear specialist or the specialist in diseases of children, and notice the wonderful improvement which can be brought about by this simple operation, and although it is a simple operation, as he has said, it is one that requires a certain amount of technic to be mastered in order to insure or obtain the best results. If anything is to be emphasized in Dr. Dupuy's paper above the rest, it is the fact that men engaged in general practice are not sufficiently familiar with the use of the ear speculum and the head mirror. It is a fact that, with the use of these two instruments, the practitioner will acquire sufficient facility to see a normal drum, or in order to diagnose a bulging drum, and with the use of these instruments tympanotomy is extremely simple. I

saw yesterday a case in point. The patient was a child referred to me with a temperature of 102° , with persistent pain in the ear, the child constantly putting its finger to the ear, and the natural inference was that otitis existed, and the inclination was to do a tympanotomy. On examination, the child's ear was found filled with cerumen, and after it was removed the drum came plainly into view and was found to be normal. Without the proper use of the speculum and head mirror a man might have gone in there and performed paracentesis, and incising the drum may not have done much damage, and yet not much good; and any man with an hour's practice or an hour's work could acquire sufficient facility to examine the eardrum with confidence.

I think, especially in children, and in adults also who can stand an anesthetic, the anesthetic of choice is nitrous oxide. Local anesthesia in the canal is almost valueless, but in children or people in a debilitated condition, if the operation can be done quickly enough so that they can stand it, with one sweep of the knife the drum can be incised freely and give the relief necessary. I have the child in a different position from that described. He has the child lying flat on the bed, but I think the child can be held securely in the nurse's arms, with one arm holding the hands and the breast of the child and the other holding the head, and in this way the child can be securely held and the incision can be made as painlessly as possible.

DR. G. W. ROBINSON, Shreveport: I do not think too much stress can be laid on the early diagnosis and early incision in these cases. Sometimes it is not easy to make the diagnosis of middle-ear trouble. There are times when, in looking at the eardrum, it appears perfectly normal in color, without much bulging, but if you think there is little trouble just wipe a little of the epidermis, and beneath that you may find that the drum is angry looking.

As to the point of elevation of temperature, I agree with the author of the paper that temperature is a poor guide, because it is a variable quantity. Sometimes I have seen quite marked middle-ear trouble with very little temperature. On the other hand, we find the temperature runs high in a case of ordinary infection without involvement of the mastoid. Tenderness over the antrum is an important point. If infection is severe, you are sure to have some tenderness over the antrum. Deep tenderness is misleading,

but antrum tenderness is a practical guide to trouble in the ear. When I find a patient with middle-ear infection it is my rule to always incise the drum. If it is an adult, and there is very little pain or only slight bulging, I incise. If there is no pain, and a great deal of bulging, I would incise. Practically with all these incisions you can never be sure what will take place. My preference is always for general anesthesia. In adults one can use quite frequently a local anesthetic. I think it is a great shock to the child without giving it some form of anesthesia, and with general anesthesia we can really make the incision where we want it, and make it to the proper extent.

DR. A. C. KING, New Orleans: I wish to congratulate Dr. Dupuy on the excellent paper he has given us. He has brought out several important points which are extremely valuable to the general practitioner. One of these important points was pain on pressure and the watch test. These two, I am sure, the average general practitioner is not familiar with. Not being a surgeon, I do not pretend to know much about this subject.

One thing in particular he brought out was the importance of the general practitioner making an early diagnosis, but that is where the general practitioner falls down—that is, diagnosing the case at the proper time and in knowing what to do. Frequently he does not know what to do. I have been up against these cases myself. I have made this mistake, and other men have made the same mistakes, and, when we do not know, we should call in an ear specialist early. We are all after the almighty dollar, and we do not want to give the specialist any of it, and when there are unfortunate and difficult cases to diagnose early I insist on the point of the inability of the average general practitioner to make the diagnosis early enough. When to make a hole in the tympanum, I do not know.

As to anesthesia, when a child is suffering from ear trouble I do not approve of having a nurse hold the child and having its drum incised without giving it an anesthetic. That child ought to be anesthetized. With the safety of anesthesia to-day, it is a simple matter to give the anesthetic. If you are afraid to give the anesthetic yourself, you can always secure the services of an expert to help you out.

DR. JOHN L. KIMBELL, Shreveport: I have been very much interested in this discussion as a general practitioner, and I wish to relate how quickly sometimes these destructive processes can do much damage. Two years ago my little son went in bathing on a Saturday. On Saturday night, at 8 or 9 o'clock, he had a chill, followed with high fever and pain throughout the night. He suffered considerably with his ear, and I decided when morning came to have Dr. Dowling see him. Various applications were used. The next morning we found that the eardrum was ruptured. I took the little fellow to Dr. Dowling's office the next day, and we found that the damage was not beyond repair.

I merely wish to relate this case to show how early rupture will take place sometimes in these cases.

DR. DUPUY (in closing): I feel amply compensated by the free discussion that has been brought out. I wish to say most emphatically that in a very young child tympanotomy can be performed without anesthesia. On the other hand, in a child two years or more of age, or in an adult, a general anesthetic is not only justifiable, but positively necessary for first-class work. Therefore, I would make the point that we should keep an eye on every baby in which we suspect ear complications, and if a child needs an adequate operation to protect its life we ought to do as simple an operation as possible, and the operation I have described can be done with less shock to the child and to patients in general when done under anesthesia.

Communication.

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EDITORS NEW ORLEANS' MEDICAL AND SURGICAL JOURNAL:

In one's itinerary, the time permitting, one should not fail to visit some of the more important cities in Germany. The distances are short, the railroad fare reasonable, and, besides the points of medical interest, there is much of historical and artistic value to engage one's attention and add much pleasure to the sojourn.

Presuming that you are in Southern Germany, I should suggest that you be sure to stop off at Munich, which is, as you know, the largest and most beautiful city in Bavaria, with a population of about 600,000. Munich is the home of the famous university of which its medical department is one of the most important factors. It is here where the artist and those of artistic temperament gather for the many advantages it offers. Its bohemian life is most delightful. Besides the renowned art galleries and fine opera, I may incidentally mention that it is here we will find the celebrated Hoffbräu and Löwenbräu breweries, whose beer is known the world over, and these places are really considered among the sights of the city. Of course, the university medical department is to us the one of prime importance, and no doubt you will be surprised to learn that the university at Munich has the largest number of medical students in Germany.

Many of the older buildings, in which some of our pioneers in medicine have expounded their theories and taught in their various branches, still exist, and no doubt will be familiar to those who have visited the dear old places in their earlier days, though they are gradually being replaced by newer and up-to-date structures.

With the exception of the Ferien courses, which are given by the assistants of the professors during the Easter holidays, and again prior to the fall term, and which are of short duration, there is no regular post-graduate work given here, though the opportunities for pursuing post-graduate study are many and easily attained in all the departments.

The medical, surgical, gynecological, and the specialties in general, usually occupy independent buildings, where bedside and clinical instruction is given. These buildings are all situated within

a short radius of one another, which makes it easy to go from one to another without much loss of time.

A visit to the hospital for internal medicine to hear one of Prof. Frederic Müller's clinical lectures and see his demonstration is a treat, and one will be well repaid by the time spent there. Prof. Müller is one of the few doctors in Munich who speaks English fluently. Last fall he visited America and claims many friends there. He is an exceedingly clever gentleman and always has an agreeable welcome for the visitor. The Surgical Hospital is just across the street from the medical department and is under the direction of Prof. Anger, who occupies the chair of surgery, and whose reputation has been established by the high character of his work. In the gynecological department Prof. Amman is the chief. Prof. Amman is considered one of the best operators on the Continent, and has an excellent technique. Just around the corner from the surgical department is the old Frauenklinik, where we will find Prof. Doederlein in charge. The professor was called to the University of Berlin a few years ago to succeed Prof. Bumt at the Charité on the latter's promotion to the University Frauenklinik, but declined the honor, and, in recognition of his loyalty, the University of Munich have now in the course of construction a new Frauenklinik, which I understand will require about three years to construct, and on its completion will be one of the finest and most modern of its kind in Germany.

Prof. Doederlein is familiar to all for his investigation of the bacteriology of puerperal infections, and his works on gynecological and obstetrical subjects, which are of the highest type, and his text-books exceedingly popular throughout this country. The professor is a clever operator and a most agreeable gentleman. He has always an abundance of both gynecological and obstetrical material, and it is not unusual for him to perform several Cæsarian sections in one week. The one looking for work in pediatrics will find here Profs. Schlossman and Pfaundler, both very capable men. The latter has been spoken of as a possible successor to the chair made vacant at Vienna by the untimely death of Prof. Escherich.

In connection, I may mention the fact that Munich is without doubt the most reasonable city of any consequence in Germany to live in, and the life there is of most delightful nature. It is an exceedingly attractive city and its environs are truly beautiful.

Within a short distance one can reach the Bavarian Alps with their delightful scenery and quaint resorts.

Of course, on your way north you must visit Frankfurt A/M, for it is one of the principal financial centers of Germany and the home of the laboratories of the famous Paul Ehrlich, whose researches have done so much to further our knowledge of medicine and benefit mankind. Prof. Ehrlich's laboratories are located in the plot occupied by the City Hospital, though quite independent. Dr. Lewis Marks, one of our former New Orleans boys, is to be found here, and is now one of the professor's regularly appointed assistants. At present the professor is, so I learned, very much engaged studying the various reports and observations from the various countries regarding his most recent discovery, "606," or as it is commercially known, "Salvarsan."

The Frankfurt City Hospital is quite an extensive affair, occupying a number of squares of ground and consisting of numerous buildings. Many of them are of recent construction, and those that were old have been remodeled and brought to the requirements of an up-to-date hospital. In the course of the reconstruction of this institution provisions were made for teaching purposes for at present the Frankfurt profession is anticipating the establishment of an university with a medical department, which, of course, is being vigorously opposed by various university cities, which are within a short distance.

Besides Prof. Ehrlich's laboratory, one would be well repaid by visiting the one under charge of Prof. Emden, whose work on metabolism is well known to those familiar with the subject.

The new Senkenburg pathological laboratory and museum is a model and beautiful in every detail, and contains all the novelties of recent invention. It is under the charge of Prof. Fischer, one of the younger generation of pathologists, while Prof. Neisser is the director of the bacteriological laboratory.

The Frauenklinik is one of the newer structures and indeed is quite complete. Prof. Walhard was called here from Berne to take charge of it. He is one of the extra-conservative gynecologists, and is advocating psychical treatment in many conditions associated with pains in the pelvis. The obstetrical service is rich in material. I understand they had some 1,400 cases last year.

Prof. Rehn, whose work in the surgery of the heart and lung

has made himself known to the medical world, directs the surgical department. The professor operates regularly three times a week and has always something of interest to show.

It is rumored that Prof. Van Norden is to return to Frankfurt, in which event he would without doubt occupy the chair of internal medicine should the medical school be established. At present Frankfurt offers no courses whatsoever, but one familiar with the language will find in this city a most excellent opportunity to study.

Frankfurt is somewhat of a central point, being quite accessible to the various universities and many of the famous resorts. Within half an hour you can reach Bad Homburg, and a little further is the noted Bad Nauheim and Wiesbaden, Schwalbach, while the famous old University of Heidelberg, Marburg, Giessen, Würzburg and Düsseldorf can all be reached within a couple of hours, and these little trips of a day afford the visitor a chance of seeing these notable towns and institutions.

Dresden, with a population of over 520,000 inhabitants, is the most important city in Saxony, and like Munich, is very beautifully situated and noted for its celebrated art galleries and its fine operas. With the exception of Berlin, it has the largest English-speaking colony in Germany and has many things to recommend it. From a medical standpoint, can say that in gynecology and obstetrics it offers most excellent opportunities. They have a very beautiful and comparatively new Frauenklinik, situated on the bank of a beautiful river. Here we will find Prof. Leopold, who is the chief professor, is an exceedingly capable man with excellent technique and is up-to-date in every detail.

Prof. Leopold receives in his clinic a certain number of men at different periods of the year to whom systematic instruction is given in obstetrics and gynecology. They do the work equivalent to our resident interne. The terms of service varies from three to six months, during which period one will be able to perform many obstetrical and some of the minor gynecological operations. For this service a moderate fee is charged, and one of the requirements for entrance is a reading and writing knowledge of German. His clinic is rich in deformities, for narrow and contracted pelvis is one of the characteristics of Saxon women.

The City Hospital here is quite a large affair and exceedingly well equipped. The famous Crédé is the surgeon in chief.

Berlin, with a population of over two millions, is the metropolis of Germany, and unquestionably the most important center. It is by far the most modern of all German cities and certainly one of the most fascinating cities on the Continent. The cleanliness of its streets is a marvel, its parks are numerous and prettily situated and ornamented with innumerable monuments. To add to its beauty the River Spree bisects the city and from it the many canals that run throughout the city are fed. The banks of the canals are terraced and planted with many shade trees, which make at this season of the year, when all is in bloom, a beautiful sight to behold.

The contrast of living in this city to Vienna is striking, the buildings here being more modern and attractive. Especially is this the case in Charlottenburg, which is one of the principal residence portions of the city. The buildings in the neighborhood of the clinics are not so new or up to date, though for one wishing to attend the early clinics they are the most desirable places, especially for the bachelor. One can reach the heart of the city from Charlottenburg within a very short time, by either the surface or subway lines, which are numerous and frequent. The living here in general is better and cheaper than in Vienna.

The Anglo-American Medical Society here, I must confess, was quite a disappointment to me, especially having enjoyed the benefits and comforts afforded by the Vienna A. M. A. Here the society has no regularly equipped club rooms, but has its headquarters at a book store in the Friedrichstrasse. Here there is a reading room containing the various American and foreign medical journals. There is a paid secretary to be found every morning from 9 till 10, whose duty it is to try to arrange courses, or give what information he can. Once a week, as a rule on Saturday evenings, at 8 p. m., a meeting is held at the Heidelberg restaurant, where there is a lecture given by one of the prominent men in the city on his specialty.

They have no regularly organized courses, as in Vienna, and in the event you wish to form a class, it is necessary to search among the men here, yourself, to get the number required by the one giving the course, which you can readily appreciate is not an easy matter, and much time is lost.

The work is here in abundance and the hospitals are numerous and most of them up to date, though widely scattered throughout

the city, and it lacks the concentration which one finds in Vienna at the Allgemeine Krankenhaus, and the time consumed in going from one institution to another is great, which means much to those who are here only for a limited time.

One finds here numerous polyclinics, which consist of several men associating themselves and securing several rooms where they give free medical advice, using the material for teaching purposes. The fees charged by the various docents, I may say, are a trifle more than those of Vienna, with perhaps the exception of genito-urinary work.

The university lectures given by the various professors are of that same high standard that one finds throughout Germany. They usually begin at eight in the morning and continue throughout the day. Visitors are always welcome and many of the Americans matriculate regularly for one or more semesters, especially those who want to work in the laboratories. That of physical chemistry, I understand, is exceptionally good, and in fact all of the laboratory courses are excellent. By matriculating they enjoy the benefits of the regular student and are instructed at a nominal cost.

Any one interested in surgery or its teaching, will miss a rare treat if they fail to visit the clinic of Prof. Bier, at the Langenbeckhaus. The professor starts his clinical lecture at eight in the morning, with demonstrations of cases, and about 9:30 he begins to operate. Without doubt he is one of the most skillful and rapid operators that I have seen on this side of the water and his technique is all that one could desire.

The professor still largely employs lumbar and local anesthesia and his results are simply amazing. On one occasion I saw him perform a gastrostomy on a man of 78 under local anesthesia. The operation was painless and the patient talked throughout the procedure. After its completion the man was given a glass of milk through his tube, allowed to sit up, and later to alight from the table unassisted and walk to the ward.

Prof. Bumm, the accoucheur and gynecologist to the royal family, who a few years ago succeeded Prof. Olshausen, is to be found at the University Frauenklinik, which is just around the corner from Prof. Bier's clinic. He starts at ten o'clock and his lectures are as popular as Prof. Bier's. He has always something of interest to show or some gynecological case to operate on. He speaks well

and has no difficulty in holding the attention of the listeners. He is an excellent operator.

Twice a year the assistants at the Charité give an obstetrical course which lasts four weeks in which the student has the opportunity of performing various operations himself on the patient, with the assistance of the chief of the clinic. For this course 400 marks are charged.

The professors of the various departments are all men of great reputations who are contributing to the science of medicine and are always agreeable to visitors.

Like in Vienna, no difficulty will be experienced in securing an appointment as a volunteer in the majority of the hospitals and clinics, provided one is sufficiently familiar with the language. To my surprise, there is comparatively little English spoken by the Berlin physicians and but few courses given in English.

Within a few hours of Berlin one can reach Dresden, Leipsic, Jena, Halle and Hamburg. The majority of these cities are equipped with excellent hospitals and they have medical schools. Here, especially in the smaller university towns, the advantages and opportunities for doing any special investigation, are unexcelled and the authorities are always ready to assist an earnest worker.

One should make these little side trips at the week's end for they will break the monotony of the constant grind and make one feel refreshed and ready to start in the coming week with renewed vigor. Till my next.

Yours truly,

MILTON A. SHLENKER.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

Prevention of Poliomyelitis.

Interest in this question has been revived by the circular recently issued by the American Orthopedic Association and the American Pediatric Society in reference to acute epidemic poliomyelitis.

The joint committee was composed of Dr. Robert W. Lovett, chairman; Drs. Henry Koplik, H. Winnett Orr, with Dr. Irving M. Snow as secretary. These names alone are sufficient evidence that the statements and recommendations conveyed in the circular are authoritative; they have been issued only after due deliberation and with all the latest facts in hand.

The circular has been addressed to health authorities mainly, but as its deductions should interest and appeal to every practicing physician, it will not be out of place to present them here.

The committee states that anterior poliomyelitis is, so far as known, a disease communicated from one patient to another, and also by means of a third person. It occurs in epidemics and tends to spread along the lines of greatest travel. There is reason to believe that it is prevented from spreading by quarantine, and with the very great prevalence in some sections of the disease in the summer of 1910, in its opinion it is essential that it should be made a reportable disease in all States, in order that its presence may be detected and its spread guarded against.

It calls attention to the particular significance of the so-called abortive cases, where indefinite ailments occur in children in communities where frank paralysis also exists. These abortive cases of infantile paralysis are undoubtedly a source of infection, and their record and study is of much importance. In a community where cases of infantile paralysis occur, cases of illness with sudden onset of fever and meningeal symptoms should be closely watched

and regarded as possible infections. In such cases, even recovery without paralysis does not necessarily establish the fact that the case was not abortive infantile paralysis.

It advises that all cases of infantile paralysis be strictly quarantined; that sputum, urine and feces be disinfected, and that the same rigid precautions be adopted as in scarlet fever. This quarantine should, in the opinion of the committee, last for four weeks, in the absence of definite knowledge as to when the infection ends. Children from infected families should not be allowed to go to school until the quarantine is abandoned. The transportation or transfer of acute cases in public conveyances should be strictly forbidden. It would be very desirable to adopt provisional quarantine measures in suspicious cases in a community where an epidemic prevails.

The report of all cases of infantile paralysis to the public health authorities should be enforced by law, and all deaths from this cause should be properly described and registered. A careful study of epidemics by public health authorities is strongly advised.

The Prevention of Hydrophobia.

As is well known, no *cure* for hydrophobia has yet been discovered, hence all the more importance should be given to its prophylaxis. Preventive treatment should be begun as soon as possible after exposure, as, while the period of incubation is sometimes as long as six months or more, it may be as short as eight days, according, probably, to the amount and the virulence of the poison inoculated.

Up to now it has been possible to administer the prophylactic treatment only in Pasteur institutes, located in a few large cities, so that exposed persons have been compelled often to travel long distances for this purpose, to their great inconvenience.

The Hygienic Laboratory of the Public Health and Marine Hospital Service has devised a method for the preparation of rabies vaccine at a central laboratory, according to the Pasteur method, from which it can be distributed to any part of this country and be administered to the patient by his own physician, who can retain the care of the case, as the technique is the same as that for any hypodermatic injection.

It may not be superfluous to state briefly what constitutes Pasteur's method for preparing the vaccine.

The spinal cord of a rabbit, dead of rabies as the result of an injection of a "fixed virus" (rabies vaccine known to kill within a fixed time), is removed under aseptic conditions. A cord containing the rabies virus is suspended over a layer of potassium hydroxide and kept at a temperature of 22 degrees C. from one to eight days. The virus is gradually weakened or attenuated as the cord is dried, the strength being decreased in direct proportion to the extent of the drying.

In the preparation of each injection a portion of a cord in which the virus has been properly attenuated by drying the requisite number of days is taken and emulsified by grinding under aseptic conditions with a weak solution of glycerin. The emulsion of rabies virus thus prepared constitutes the first dose.

The second dose is prepared in the same manner, from a portion of the cord which has not been attenuated to the same degree, and each subsequent dose is prepared in like manner from cords containing virus of increasing potency.

Already a rabies preventive treatment is being furnished by one of the manufacturers of biologic products. It consists of twenty-five injections of rabies vaccine, the strength of each injection varying in accordance with the plan of treatment adopted by the Hygienic Laboratory of the United States Marine Hospital Service. Cords with virus of various strengths are kept in constant readiness for preparation of rabies vaccine to meet all emergencies.

The vaccine is furnished in ampuls, and all the physician is required to do in making the injection is to mix the vaccine in the ampul through a special needle, furnished with each syringe, with the physiologic salt solution contained in each syringe, then inject the patient. The technique is as simple as an ordinary hypodermatic injection.

Special Caloris Vacuum bottles are used in the shipment of each day's supply of vaccine, insuring its receipt in a satisfactory condition.

Of course, immediately following upon suspicious bites, every precaution should be employed until it is proven that the suspected animal did or did not have rabies. Aside from cauterizing and otherwise treating the wounds, arrangements should be made at

once for the Pasteur treatment. If the animal responsible for the wound or infection is alive it should be kept securely under observation for at least two weeks. Infection may follow from the bite of an animal apparently normal at the time of biting. Not until it is definitely known that the animal has rabies should it be killed. After the animal is dead, its head should be removed and sent to a State or municipal laboratory equipped to properly examine the brain for evidences of rabies.

According to statistics, rabies is more common in the summer months, therefore at this season of the year, with danger of mad dogs running amuck, the method of supplying rabies vaccine so that the physician may administer it to his own patients is of particular interest to our readers.

With proper precautions and the prompt application of the Pasteur treatment, the fatality from hydrophobia should be reduced to a minimum.

It is extraordinary that even to-day there are some people who consider hydrophobia an imaginary complaint. Any one, layman or doctor, who has seen a single case can entertain no such doubt, as the average case is as clearly typical as that of any other disease, although not corresponding to the lay conception of this horrible malady.

Two cases occurring during the internship of the writer can serve to illustrate both sides of the question. One was that of a boy who was brought to the Charity Hospital by a mother ignorant in general and of anything in particular to account for her son's ailment. The pain existing along certain nerves and the occurrence of a pharyngeal spasm during the examination led to the diagnosis and the discovery that a stray dog had bitten the patient a few weeks previously—a forgotten fact. The boy died with all the characteristic signs of the disease.

The other was that of a colored adult whose admission to the ward was announced by the nurse (a convalescent patient of the old days) in the statement that he had a patient with hydrophobia, because the man was *running on all fours* all around the ward, *barking like a dog*. Needless to add that this one did *not* have rabies.

Dr. Souchon's Appointment.

The Governor has appointed Dr. Marion Souchon as a member of the Board of Administrators of the Charity Hospital, *vice* Dr. George Bel, resigned.

Dr. Souchon can still be considered one of the younger members of the profession, but he has already occupied other positions of trust and distinction. He has the double stimulus of following the steps of his eminent sire, who served efficiently on this same board thirty years ago, and of duplicating at least that good work of his own predecessor on the board. We feel sure he will be equal to the requirements of the responsible position, and we extend to him our congratulations as well as good wishes.

Abstracts, Extracts and Miscellany.

Department of Obstetrics and Gynecology.

In Charge of DR. P. MICHINARD and DR. C. J. MILLER, New Orleans.

EPIDURAL INJECTIONS FOR BACKACHE.—Hans Albrecht (*Zent. f. Gyn.*, Jan. 14, 1911—*Amer. Jour. Obst.*, May) says that backache is a symptom that results from all sorts of conditions. It may be of peripheral or central origin; it is associated with pyelitis, chronic constipation, sigmoiditis, gastroptosis and enteroptosis, due to the pelvic congestion that is produced by them. Hyperesthesia and hyperalgesia of the spinal nerves cause neuralgic pains.

The author divides these manifestations of pain into two categories—functional neuroses, reflex from some other organ, and neuralgias due to general conditions like anemia and chlorosis. The symptoms are amenable to treatment by epidural injection of physiological salt solution, but not if caused by major gynecological troubles. Of the cases treated in this way there were sixteen of severe functional neuroses, nine of which were cured by the first injection, one after three injections; four cases were improved, and two had no result. There were six cases of infantile uterus;

in four, recovery from pain was immediate; in one, relief was temporary, and one had no result. There were seven cases of enteroptosis. After other means had been used to relieve the prolapsus, six were relieved of the backache by injections of salt solution. Of cases of retroflexed uterus, with pain after fixation, pain remained in seven, and in three cases was relieved by injection; three were not benefited. Of thirteen cases of old inflammatory lesions of the adnexa, eleven were relieved by injection. In two cases of backache after extirpation of the uterus, relief was given. In seven cases of enuresis, there was prompt relief in two. The report includes fifty-three cases of backache, with 72 per cent of cures; 25 per cent of negative results. Relief is not obtained in major genital diseases, but is marked in neuroses and neuralgias.

MILLER.

Department of Therapeutics and Pharmacology.

In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

TETANUS FROM "FUENTES."—"Fuente" is a cure practiced by the abolarios or unlicensed physicians in the Philippines on persons suffering from stubborn diseases, such as beriberi, tuberculosis, anemia, etc., which they think physicians have failed to cure. Llama says that it is a common belief among the poor class of people (and of some of the middle class), especially in the provinces, that they are relieved from their long suffering by opening a "fuente," as they express it, either on the arm, thigh or leg. Undoubtedly this custom also prevails in Manila, having probably been introduced from the provinces. To start the infection, a mixture of lime and Chinese soap, in the proportion of two to one, is made into a "bolita" (pill), the diameter of which varies from 0.5 to 1 c. m. This pill is then placed on the fleshy, least vascular part, usually the arm or leg, and is held in place by a tight bandage for twenty-four hours or until a blister is formed. Next day another "bolita" of the same size made of garlic is placed on the surface of the previously-opened blister, the wound dressed as before, and the dressing is not removed until pus is produced and a

cavity formed. The same effect may be produced by burning the skin directly with a lighted cigaret. The cavity once formed, another "*bolita*," made of Chinese wax or betel nut, is put in and covered with a piece of Chinese blotting paper. A hole is made in the middle of the paper and a piece of banana leaf is put on next, and loosely bandaged. By the pressure the cavity receives it becomes so deep that the pill soon has a cavity large enough to hold it.

Each part of the dressing has its own purpose. The pill is to maintain constant pressure on the cavity and to prevent any healing. The Chinese blotting paper absorbs any secretion, the banana leaf protects the wound from becoming wet, and the bandage keeps out the air. The wound is washed morning and afternoon with warm guava water, or ordinary tepid water, and the dressing is changed. It is supposed that the secretion removes the impurity of the blood which has caused the sickness. If the "*fuenta*" fails to cause secretion, the sickness is said to be incurable; if the patient gets well, the "*bolita*" or "*pelotilla*" is removed and the wound treated as before until it heals. Last May, Llama treated a case of tetanus which was contracted through a "*fuenta*" in the right leg of a woman suffering from beriberi and anemia. He thinks that an investigation would show that many cases of tetanus originate from infections due to the application of "*fuentes*."—J. A. M. A. J. A. S.

EFFECTS OF VARIOUS FORMS OF EXERCISE.—The conclusions to be drawn from Lowsley's experiments are as follows: All types of prolonged exercise which cause an increase in pulse rate cause also a rise in systolic and diastolic pressures. The systolic pressure shows the greater rise; hence there is an increase in pulse pressure, which may be interpreted to mean that the heart-beats are augmented as well as accelerated. After all types of exercise studied, the systolic, diastolic and pulse pressures invariably fall below normal and remain in this subnormal condition for a considerable time. The more exhaustive the nature of the exercise, the longer will be the subnormal period which follows. Systolic pressure invariably falls more rapidly than diastolic, and hence the pulse pressure becomes weaker. Pulse rate, which always increases during exercise, decreases rapidly after its completion. Rapid

exercise (vigorous, fatiguing and exhausting) are followed by a fall of pressure below normal which lasts longer than after moderate exercise, even if the former is continued only for a very short period and the latter for quite a long period of time. If Lusk's interpretation of the subnormal phase is correct, it would follow that the so-called field events consisting of jumping, shot putting, discus and hammer throwing and baseball, gymnasium apparatus work, and exercise of a similar nature, are preferable to rapid exercise, such as basket-ball, football and running races. This is particularly true in the case of the rapidly growing youth, whose heart is under the additional demand of keeping pace with an increase in the tissue mass of the body. There is less strain put on the circulatory system by walking a number of miles at a moderate rate than by sprinting 100 yards at top speed. Long-distance races and similar forms of exhaustive exercise give rise to a serious strain on the heart, as is indicated by the long period of subnormal blood pressure.—*Ibid.*

J. A. S.

PHTHISIOPHOBIA.—The resident staff of the Cook County Hospital has been traced by Tice, and the frequency of tuberculous infection determined as accurately as circumstances will permit. During the period thirty-three years, from 1866 to 1902, 376 physicians have served as interns, and each member, with the exception of the first three, has served a period of eighteen months. Until within the last year and a half no attempt has been made to segregate the tuberculous patients, but they were cared for in the general ward, not especially constructed for this class of patients, and where no special precautions were enforced. Of the 376 members of the resident staff, three had tuberculosis before their service, four during their service, and thirteen have developed it since that time, making a total of twenty, of whom six have died. Accepting the validity of the preceding statements, Tice thinks it is evident that the danger of infection in tuberculosis has been overestimated and exaggerated. As a result, tuberculous individuals and the public at large have been subjected to great inconvenience and hardship. The medical profession, he declares, should realize the evils of these misconceptions and endeavor to correct them so far as possible. Physicians should no longer continue to repeat many of the current stereotyped statements on tuberculosis, but

more nearly to approach the truth as indicated by knowledge of recent developments. The nursing profession should be instructed properly and trained in the care of tuberculosis. Since much of the fear of tuberculosis has resulted from the educational efforts of the various anti-tuberculosis organizations, it becomes incumbent on them to continue their efforts and assist in diminishing this evil.—*Ibid.*

J. A. S.

THE TREATMENT OF AMEBIC DYSENTERY.—Axisa (*Therapie d. Gegenwart*, 1910, li, 263) says that the usual methods of treating amebic dysentery are most unsatisfactory. Ipecac, which is considered a specific by many, has the marked disadvantage of causing vomiting, or at least nausea. High irrigations are too painful to be of use in the acute cases, although valuable in the treatment of subacute and chronic cases. Axisa calls attention to a remedy introduced by Legrande under the name of kossam. This remedy has been used in a crude way by the natives of tropical countries as a cure for dysentery for some time. It may now be obtained in tabloid form. Axisa has used it, and speaks very highly of its good effects. The most striking effect is in the rapidity with which the blood disappears from the stools. He ascribes a hemotatic action to the kossam, and has also used it with success in profuse hemorrhages in intestinal tuberculosis and bleeding hemorrhoids. In addition, this remedy also seems to exert a direct action upon the amebæ. Of 37 stools that were examined, no amebæ could be found after treatment lasting from eight to ten days. Kossam is not astringent, and as the blood disappears from the stool it is advisable to add intestinal astringents to the treatment. When the process becomes subacute, high irrigations with a 0.5 or 1 per cent solution of tannin will hasten the cure. He gives the details of a number of cases treated by this method, and says that he has seen a number of cases completely cured in three weeks—a result that could only be obtained in from six to eight weeks by former methods of treatment. For the treatment of subacute and chronic dysentery he advises, in addition to kossam, high irrigations of either a 1 per cent ichthyol solution or a 0.5 to 1 per cent solution of tannin. He also advises an occasional purge of sodium sulphate, and finally, when amebæ are no longer found, the administration of such astringents as bismuth or tannin until there is no longer any diarrhea.—*American Jour. of the M. Sciences.*

J. A. S.

VACCIN THERAPY IN TUBERCULOSIS.—King (*New York Med. Jour.*, 1910, xcii, 164) says that for the present vaccin treatment in tuberculosis consists in, first, the treatment of the tuberculous infection itself by some one or more of the tuberculins; and, second, the treatment of the secondary pyogenic infection by the specific bacterial product indicated by the character of the secondary infection. He believes that there is no especial advantage in the use of autogenous tuberculins. On the other hand, the comparative ease of preparation and standardization of autogenous bacterial vaccines to meet the requirements of the usual secondary infection renders their use both practical and preferable. At the Loomis Sanitarium two classes of patients are advised to take tuberculin: (1) The class of incipient cases which have been under observation for a sufficiently long time to justify the belief that they are not progressive and are without fever or other evidences of a marked general toxemia; (2) the class of more advanced cases, presenting evidence of "arrested" activity, the patients having been for some time without material change in their condition, either local or constitutional, but who still have cough and tubercle bacilli in their sputum. King thinks that the choice of tuberculin is more a matter of arbitrary preference on the part of the physician than of advantage on the part of any particular tuberculin. He prefers bacillus-emulsion in most cases, though giving no reason for this choice. At the Loomis Sanitarium, as a routine practice they begin with 0.0000001 gram (solid substance) of bacillus-emulsion and 0.0000001 c. c. of bouillon filtre, and proceed by 50 per cent increases until 0.0001 gram or 0.00001 gram in case of bacillus-emulsion, and sometimes larger doses in case of bouillon filtre are reached; afterward proceeding at the rate of 20 per cent increases until the maximum dose or the termination of the course is reached. However, should intolerance for an increased dose develop at any time during the treatment, this plan of progression may be wholly changed. No attempt is made to attain a definite maximum dose. It is rare to exceed a maximum dose of 0.001 gram of bacillus-emulsion and 0.1 to 0.5 c. c. of bouillon filtre at the end of a course of from seven to nine months. King thinks it safer to give the tuberculin at intervals of one week, though it is no doubt safe to give the tuberculin twice a week during the earlier stages of the treatment. General reactions are to be avoided, but King thinks

that local reaction may be actually advantageous in some cases. In young persons, when the superficial lymphatics are the only demonstrable foci of infection, a reaction characterized by some swelling and tenderness in the infected glands is almost always followed by a distinct improvement. This also seems to be the case in some laryngeal cases, though in those cases in which an old fibroid infiltration has already appreciably narrowed the glottis, a focal reaction may undoubtedly cause a sudden and very alarming stenosis. Such a lesion, according to King, contraindicates tuberculin treatment. King has also treated cavity cases with persistent high fever that does not yield to complete rest in bed with autogenous vaccines prepared from the patient's sputum. He gives the method of preparation of such a vaccine, and states that no untoward effects have occurred as a result of this treatment. He thinks that a relation can be traced between this treatment and a remission in the symptoms, chiefly in lowered temperature in the majority of cases so treated. The number of cases treated, however, has been too few to admit of any positive statement as to the value of the practicability of this method of treating the complicating pyogenic infections in pulmonary tuberculosis.—*A. J. of the M. Sciences.* J. A. S.

ATROPIN CURE IN ULCER OF THE STOMACH, AND OTHER INDICATIONS FOR ATROPIN IN INTERNAL MEDICINE.—Schick (*Weiner. klin. Woch.*, 1910, xxiii, 1229) believes that good results are obtained by the use of atropin in the treatment of gastric ulcer. The subjective symptoms, especially pain, disappear quickly after beginning the treatment. Hyperacidity and hypersecretion were less quickly influenced. Pyloric stenosis due to cicatricial contraction was either not at all or only slightly influenced. Schick agrees with the view of Eissinger and Hess that many ulcer cases are dependent upon an increased vagus tone. This increased vagus tone stimulates the gastric secretion as well as the gastric musculature, and can be diminished by a systematic use of atropin. He mentions a long list of conditions benefited by this drug. Among these are spastic constipation, bronchial asthma, excessive sweating, nervous hypersecretion, lead colic, membranous colitis, in certain cases of intestinal obstruction, in cardiospasm, in spasms, in esophageal carcinomata, in gallstone, and renal colic. J. A. S.

ANTITYPHOID VACCINATION.—Harstock (*Jour. Amer. Med. Assn.*, 1910, liv, 2123) believes that antityphoid vaccination by means of the injection of dead typhoid bacilli is now destined to be a practical measure of prophylaxis and of value in the handling of typhoid epidemics. He says that in promulgating this vaccination as a popular measure it is necessary to convince the patient as to its immediate benign effects. The layman must be assured that there will be no detention from business and that the injection is without harm. The military commander, in times of war, when troops are being mustered in, must be convinced that his forces will be ready for duty at any time. Harstock reports a series of 1,100 vaccinations that, according to him, give sufficient evidence to assure affirmatively both the above. He advises antityphoid vaccination for the following classes: (1) All persons between the ages of fifteen and twenty-five—Osler states that the greatest susceptibility to typhoid is between these ages; (2) all persons exposed in time of an epidemic; (3) nurses and physicians; (4) all persons in the military service, and more particularly in time of war, when troops are enrolled and concentrated in camps.

J. A. S.

INTRAVENOUS AND SUBCUTANEOUS ADMINISTRATION OF DEXTROSE.—Kausch (*Deut. med. Woch.*, 1911, xxxvii, 8) has had gratifying results from subcutaneous or intravenous administration of glucose in patients unable to retain food in the stomach or rectum. No complications or sequelæ have occurred in more than forty cases. The sugar is dissolved in 0.85 per cent sodium chloride solution, filtered and boiled to sterilize it. For subcutaneous use, Kausch employs 1,000 c. c of a 2 per cent sugar solution. The percentage can be increased gradually to 5. Intravenous injections of 1,000 c. c. of 5 to 7 per cent glucose are well borne. If an 8 or 10 per cent glucose solution is used, 2 to 10 per cent of the sugar injected is excreted in the urine. In some cases the author has used two intravenous injections of one liter daily. The subcutaneous infusion is no more painful than plain physiological salt solution. While the author's experience has been confined to surgical cases, he recommends that this method of feeding be extended.

J. A. S.

Department of Internal Medicine.

In Charge of DR. E. M. DUPAQUIER, New Orleans.

THE USE OF DIPHTHERIA ANTITOXIN IN TYPHOID FEVER HEMORRHAGES.—Majors Marotte and Oui (French Army Medical Corps) report in the *Archives de Médecine Militaire* two cases, showing remarkable results obtained by the injection of diphtheria antitoxin in repeated hemorrhage during typhoid fever.

They recall that since Weil originated the method of using serum in hemophilia with the object of introducing into the blood the coagulating ferment it lacked, many have been the good results. But at first, in the originator's mind, it applied only to cases of "family hemophilia," "sporadic hemophilia," whereas now, step by step, the use of serum has been extended to other kinds of hemorrhagic conditions, including purpura, leukemia, also surgical and obstetrical hemorrhages. At first it was only the normal and fresh serum from the horse that was used, the serum from the ox and dog having been discarded because of its particular toxicity in man. At present most clinicians, chiefly those who are not in large centers, are using *instead* diphtheria antitoxin, a horse serum, but with the advantage of avoiding the delay in the preparation of fresh horse serum. Of the hemophilic conditions caused by certain infectious diseases, it is particularly in those which are often seen during typhoid fever that serum therapy is indicated, because of the dyscrasia due to the infection, and the antidiphtheritic serum, in such cases, acts both as the usual coagulant and as a powerful antitoxic, which helps the organism to win out. At least, this seems to be the right deduction to make from the reports by Majors Marotte and Oui.

Their first case, severe typhoid fever, bled from the gums, nose, lungs, intestines; he had purpura, his blood was not retractile; there was hypoleucocytosis. First injection: 30 c. c. of diphtheria antitoxin. Next day, slight improvement. Injection repeated, 20 c. c.; again 10 c. c. on the following day. Convalescence started a few days later.

Their second case was about the same, except that, in addition, he bled from the bladder. First injection of 20 c. c. of diphtheria antitoxin proved insufficient. Improvement began only after 30

c. c. had been injected, and patient continued to improve steadily.

Similar reports have been made by others, in particular by Mongour and Cazamien. It is thought that the diphtheria anti-toxin in such cases acts *directly* as an hemostatic, just as the normal fresh horse serum does, and *indirectly* as an antitoxic to the typhoid fever toxin.

FIXATION ABSCESS IN PNEUMONIA.—It is an established fact that the creation of an artificial abscess, by the injection of 1 c. c of turpentine under the skin of the abdomen or thigh, in pneumonias which do not clear up within the usual period, is followed by remarkable results in six out of ten cases. The French clinicians have, as a progressive step, obtained results by using the method in other infections, chiefly the puerperal. Some of them do not hesitate to inject turpentine to bring about a fixation abscess in every severe case of pneumonia. It must be made early. Of course, there are contraindications, namely, diabetes, tuberculosis, anasarca. There is a technique which any one who cares to learn can look up in current French literature. It is stated that, in the cases referred to, where no suppuration follows, the prognosis is very grave. When local suppuration occurs, the general condition improves at once.

Charity Hospital Bulletin.

In Charge of DR. J. A. DANNA, House Surgeon.

A FURTHER NOTE ON EXTRADURAL INJECTIONS BY SACRAL PUNCTURE IN GENITO-URINARY NEUROSES.—In an article recently published in this journal on "Extradural Injection by Sacral Punctures in Genito-Urinary Neuroses," I reported seven cases illustrating the efficiency of the method, and expressed regret at not having had the opportunity to apply Cathelin's method for the treatment of nocturnal enuresis in the young. This opportunity has come, and I now wish to add the following two cases as further evidence of the efficiency of the method:

CASE VIII. Girl, 16 years of age, with nocturnal enuresis since babyhood; otherwise normal, healthy and well developed; neurasthenic mother; had tried all known remedies without avail. On April 11, 1911, first epidural injection 30 c. c. tropacocain solution

(1 gr. to 1 ounce normal salt solution), with no effect. The second injection of 50 c. c. of Hayem's solution, made May 6, 1911 resulted in complete cessation of enuresis.

CASE IX. Male, aged 13 years, brother of Case VIII; same condition and history; slight benefit after first injection of 25 c. c. of tropacocain solution made on same date as for preceding case; complete success after second injection of 45 c. c. of Hayem's serum (normal salt solution with sodium phosphate) on May 6, 1911.

Again, I repeat that extradural injections with normal salt solution, or any mild analgesic solution, offer the most promising results in abnormalities of urination due to faulty vesical innervation.

S. P. DELAUP, M. D.,

Visiting Surgeon in Genito-Urinary Department.

PERFORATION OF THE COLON DUE TO AMEBIC ULCER.—V. Scarboli, white male adult, 70 years old, was admitted to the Hospital June 24, 1911. He was in a stupor from the time of admission; pulse, temperature and respiration were normal. Physical examination was negative. The patient remained in stupor up to the time of death, and it was impossible to get any previous or past history. He had about three defecations daily, but nothing unusual was noted concerning them.

On June 27 the temperature rose to 103°, the pulse became rapid and feeble, the abdomen painful, rigid and typanitic. Physical examination otherwise negative. From this time on there was an almost constant passage of blood and mucus from the rectum. The patient died the following morning.

Autopsy showed huge ulcers of the entire colon. These ulcers were irregular in shape, the edges were undermined and the floor of several of them was formed by serosa alone. One ulcer, in the ascending colon, near the ileo-cecal valve, had perforated, strewing intestinal contents on the free peritoneal cavity. Amebæ were isolated from these ulcers. The specimen is now in the Pathological Department of the Charity Hospital.

S. CHAILLÉ JAMISON, R. S.

Louisiana State Medical Society Notes.

In Charge of DR. JOSEPH D. MARTIN, Secretary, New Orleans.

OFFICIAL MINUTES OF THE THIRTY-SECOND ANNUAL MEETING.

GENERAL SESSION.

[Minutes of the House of Delegates will be published separately and will follow minutes of the General Session.]

MAY 30, 1911—FIRST DAY—MORNING SESSION.

The Society convened in the City Hall, and was called to order at 9:50 A. M., by the President, Dr. E. J. Graner, of New Orleans, who said:

"Fellows of the Louisiana State Medical Society:

"I have the pleasure this morning of calling you again together in our thirty-second annual meeting. I trust this meeting will be interesting and prove beneficial to all of us. In proving our condition we must ever remember that knowledge is simply handed to us, so that we can give it to the people, thereby bettering their condition and bettering ours. The previous meetings of our Society have always been good, and I sincerely trust that this meeting will be no exception. I welcome you all, and I trust we will enjoy the hospitality that this great city of Shreveport has mapped out for us. I will now introduce to you the Rev. Jasper H. Smith, who will deliver the invocation."

Prayer was offered by Rev. Jasper H. Smith, of Shreveport.

In the absence of Hon. J. H. Eastham, Mayor of Shreveport, City Attorney E. Whitfield Jack delivered the following

Address of Welcome.

"Mr. President and Members of the Louisiana State Medical Society:

"I regret that the Mayor has been called away on important business this morning, and that he is unable to welcome you to the City of Shreveport. In his absence this pleasant duty devolves

upon me, and I wish to accord you, one and all, a hearty welcome to this city. It is peculiarly unfortunate that the Mayor cannot be with you, for, as you all know, next to doctors, lawyers are perhaps the most timid class of people in the world. A year ago I could perhaps have better faced an audience of this kind with less shrinking and modesty, but it so happened that our good friends, Dr. Willis and Dr. Hendrick, got me on the operating table at about this time last year, whetted their knife and began the operation. They had me down, and I learned that it is the universal custom of doctors, when they can, to get a lawyer down, and they performed that abominable operation—I mean abdominal operation—on me, and then they proceeded to extract half of my nerve and all of my gall, so that I feel at a disadvantage. However, there is always a happy and brotherly feeling between the two professions, so that we feel at home here to-day together. We are glad to see so many of you present, and we sincerely hope that you will have a good time during your stay in Shreveport. In fact, we would like some of you to come here and settle down, because we need in Shreveport something besides lawyers. We need a few more doctors. They are a scarce article here. I hope a good many of you will decide to abide with us to make this your home. It is a good place to be. During this convention, I apprehend, there will be no scarcity of doctors. I regret not only the absence of Mr. Eastham, but the unavoidable absence of State Senator Barrett, who was to have delivered an address of welcome on behalf of the doctors and the City of Shreveport. Mr. Barrett, as a great many of you know, is a candidate for State office. When I was talking with him a few nights ago he expressed his regret that he would be unable to be here and address you, but that he had the doctors *on his side* anyway. As you know, he recently underwent an operation for appendicitis. Again, we are glad to welcome you to the City of Shreveport. We are glad to have the doctors meet with us to discuss new ideas and new methods and to add to the general store of information. We welcome you all, and in behalf of the city administration and people I welcome you to this city. You have the freedom of the town."

Address of Welcome on Behalf of the Shreveport Medical Society.

DR. MILTON F. SMITH, President, said :

"Mr. President and Gentlemen of the Louisiana State Medical Society:

"As the spokesman of the Shreveport Medical Society I extend to you a most hearty welcome. Only once before has Shreveport had the honor of entertaining the State Society. Nine years have passed since that time. The Shreveport of nine years ago is quite different from the growing city that will welcome you to-day. Since you were here last the State has erected a modern brick structure for the Shreveport Charity Hospital, so that it can better meet the growing demand upon that institution. This worthy charity is deserving of a most liberal consideration, and you gentlemen of this association can aid us in building up, with our Representatives and Senators, a sentiment that will insure a more adequate opportunity for this State institution.

"Shreveport now boasts of two modern sanitariums. It was only this month that the T. E. Schumpert Memorial Sanitarium was completed and dedicated to the splendid service that it is destined to render. In this connection it is only meet and fitting that I should speak of our friend, a distinguished member of this Society, a man whose skill as a surgeon was recognized beyond the confines of this State and who won for himself a high place in his chosen profession. The saying that 'to succeed in a profession you must love the work' found an exemplification in T. E. Schumpert, for the splendid sanitarium that bears his name stands as a monument to the way he regarded his work.

"Since last you were here in convention assembled the State Society has been reorganized on a firmer and surer foundation, being now composed of every parish in the State, and it is evident that its influences and possibilities are now very great. It is with pardonable pride that I refer to the comprehensive campaign our present State Health Officer has launched for a cleaner and more sanitary State; the great work he has set himself has challenged the interest and attention of not only the people of Louisiana, but those of other States. It has set our people to thinking along sanitary and hygienic lines. Dr. Dowling has already won for himself a place among those men who in the world to-day are doing things.

"If the State Board of Health can attract public interest and attention by its work in so short a time, then does it not argue what a potent influence this Society may become in Louisiana? The medical profession in this State is without the influence and regard that is rightfully its due. Our State Legislature has not been noted for its progressive medical legislation. Why this is so, and where to place the responsibility, is beyond the limits of my remarks. My only purpose in touching on this theme is to emphasize the importance of our yearly meetings, and the work ahead that we must do to come into the appreciation that our profession justly merits. In the field of prevention lies the greatest work ahead of us. The doctrine that 'a short life is a sign of divine favor' has never been accepted by the majority of mankind. Longevity is now regarded as one of the grandest prizes of our human existence, and the way to acquire long life is the task to which our profession, through the work of prevention, is addressing itself.

"Gladstone, a century ago, saw the difficulty in the way of success, for he said, 'The constantly growing complexity of disease, as the pace at which we live is quickened; the demand both on thought and on emotion are heightened, without any corresponding increase in natural force in the organs or faculties which are to meet these demands.' Since we must take serious thought of the great problems ahead of us that pertain to the work of this convention, I am reminded that my purpose is the more pleasing one of voicing the welcome of our Society to you. We are delighted to have you with us as our guests; we assure you that a hearty and genuine welcome is yours."

Report of the Committee on Arrangements.

DR. OSCAR DOWLING, Chairman of the Committee on Arrangements, gave an outline of the entertainments which had been prepared by the committee.

At the conclusion of Dr. Dowling's report the scientific session was begun. (*Papers and discussions to be published.*)

MAY 31—SECOND DAY—AFTERNOON SESSION.

The Secretary presented matters to the general meeting from the House of Delegates. He read the report of the Committee on

Medical Education. (*For report, see minutes of the proceedings of the House of Delegates, which will be published later.*)

It was moved that the report be adopted as read, and a copy of the same forwarded to the Council on Medical Education of the American Medical Association, Chicago. Seconded and unanimously carried.

The Secretary read resolutions with reference to pellagra, which were referred by the House of Delegates to the general meeting for action. (*See minutes of the House of Delegates.*)

The President called attention to the premium offered in connection with the resolutions and said that, while the new President should appoint a committee, he would caution the Society to be slow in offering this premium.

After discussion, the resolutions were adopted, striking out the premium.

JUNE 1—THIRD DAY—AFTERNOON SESSION.

DR. JAMES A. NEILL, of Arcadia, moved that votes of thanks be extended to the Shreveport Medical Society, to the North Louisiana Sanitarium, to the Schumpert Memorial Sanitarium for the many courtesies and favors they have shown the members and their guests. Seconded and unanimously carried.

DR. GRANER, in introducing his successor, said:

"I want to thank you and express my appreciation of the honor this Society conferred upon me, as I realize it was the greatest honor that the Louisiana State Medical Society and the doctors of this great State could confer upon any man. It will always be one of my greatest delights to think I was at one time President of the Louisiana State Medical Society. Dr. Simmons, in introducing you as President-elect of this Society, you will realize the great honor that has been conferred upon you by the men of this State. I must say I feel they have made no mistake in electing you to this honorable office, and as I hand you the insignia of this office I trust your duties and your relations with the medical men of this State will be as pleasant as mine have been, and when the time comes for you to retire you can only look back with a high appreciation of the honor that they have conferred upon you."

DR. SIMMONS, in accepting the presidency, said:

"I thank you very much for the honor that you have conferred upon me in electing me to the presidency of this Society. I con-

sider that it is the greatest honor that can be conferred upon any medical man by any body within the gift of the people of this State. In accepting this office, I want to say to each and every one of you that I accept it with the distinct understanding that I will have your hearty co-operation during the next year, and I hope that when I shall have laid down this gavel to my successor you members who have placed me in this position will be satisfied with the work that I have tried to perform.

"Gentlemen, I thank you again, and I want to say that I will ever remember this day as being the greatest day of my life and the most pleasing incident in my whole medical career."

President Simmons then introduced the First Vice-President, DR. J. C. WILLIS, of Shreveport, who said:

"I thank you for the honor you have conferred upon me. I consider it at least the second best honor in the gift of the profession, and as, in common with many other doctors, I am short on speech-making, but long on promises, I will promise you that what we lack in speech-making we will try to make up in work."

There being no further business, scientific or otherwise, to come before the meeting, on motion the Society adjourned.

Medical News Items.

PARISH SOCIETY REORGANIZED.—The Physicians of Vernon Parish met at Leesville, La., May 17, and reorganized the Vernon Parish Medical Association, electing Dr. F. P. Jones, Leesville, president; Dr. N. M. Palmer, Fullerton, vice-president, and Dr. M. R. McAlpin secretary-treasurer.

THE BIENVILLE PARISH MEDICAL SOCIETY held its regular meeting on July 12, at Gibsland, La. There were many interesting and instructive contributions to the programme. The members and guests of the Society were dined at the Colbert Hotel.

SENSES HOSPITAL BENEFITS.—By the will of Frederick A. Keep, formerly of New Orleans, the Eye, Ear, Nose and Throat Hospital of this city is to receive \$1,000.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.—Preliminary announcement has been made of the thirty-seventh annual meeting

of this Association, to be held in Nashville, Tenn., October 17-19, 1911, with headquarters at the Hermitage Hotel. Dr. John A. Witherspoon, chairman of the local committee of arrangements, is planning excellent entertainment for the members and guests of the Association.

FREE CLINIC ON MENTAL DISEASES.—New York's first free clinic for mental diseases opened on June 3, at the Long Island State Hospital for the Insane. The purpose is to discover incipient insanity in time to prevent development into incurable mental diseases.

MEDICAL CLUB CHANGES NAME.—At a recent meeting of the Physicians' and Surgeons' Club of Shreveport it was decided to change the name to the Academy of Medicine.

THE HOUSE OF DELEGATES OF THE AMERICAN MEDICAL ASSOCIATION, at the recent meeting in Los Angeles, adopted resolutions, among others, approving the Owens Bill, creating a Department of Public Health, and chose Atlantic City as the place for the next meeting. Dr. Abraham Jacobi, of New York, was elected president of the Association; Dr. A. R. Craig, of Chicago, secretary; Dr. Wm. A. Pusey, Chicago, treasurer; and as trustees, Dr. Philip Marvel, Atlantic City; Dr. Philip M. Jones, San Francisco; Dr. W. T. Sarles, Sparta, Wis.

BOARD OF MEDICAL EXAMINERS OF VIRGINIA.—At the last meeting of the Board of Medical Examiners at Richmond, Va., there were 158 applications, four of which were women.

DR. J. FRANK LYDSTON states that the book compiled by one A. V. Harmon and one W. J. Jackman, under the name of "Large Fees and How to Get Them," of which he is alleged to be a joint author, is, so far as the use of his name is concerned, a forgery. All persons selling or circulating same, or advertising or reviewing the book in connection with his name, do it at the risk of legal complications. Other journals are asked to copy, and anyone receiving circulars advertising said book will confer a favor by sending to Dr. Lydston such circulars, with the envelope in which they were received.

ON THE EVENING OF JUNE 23 there was a gathering of the Tulane M. D.'s studying in Vienna. At the supper there were present Prof. Halsey; J. Spencer Davis, Dallas; Picard, Gonzales;

Gremillon, Alexandria; Wilson, New Orleans; Eustis, New Orleans. They expect to get together each week.

H. K. MULFORD COMPANY have built and equipped special laboratories at Glenolden, Pa., and under the personal direction of expert bacteriologists are preparing rabies vaccine after the method of Pasteur. Application may be made to them for details.

LOUISIANA RAILWAY SURGEONS' ASSOCIATION FORMED.—On May 29, 1911, the Tri-Railways Surgeons' Association met in Shreveport, La., in joint session with the Louisiana Railways Surgeons' Association, and also representatives from the Texas & Pacific, New Orleans & Great Northern, and New Orleans Terminal Company. The Louisiana Railways Surgeons' Association was formed. The object of the association is to include all reputable surgeons now in service on the railroads in the State of Louisiana, as well as railroads having their origin and termination in the State, though running into adjoining States. The movement has been on foot for several years, and it is believed that it can be made into a very strong association, and, with the co-operation of all the railroads, be of mutual benefit to both surgeons and railroad companies. An election of officers was held, with the following result: President, Dr. H. B. Gessner, New Orleans; first vice-president, Dr. J. B. Guthrie, New Orleans; second vice-president, Dr. S. L. White, Ruston; third vice-president, Dr. H. B. Wilson, Vicksburg; secretary, Dr. Jos. D. Martin, New Orleans; treasurer, Dr. Dan Kelley, Winnfield. A committee composed of Drs. E. D. Martin, chief surgeon New Orleans & Northeastern Railroad; Rawley M. Penick, chief surgeon Louisiana Railway & Navigation Company, and H. C. Cole, chief surgeon New Orleans & Great Northern, was formed to assist in the organization of the new association, and it is hoped that every railroad surgeon in the State will take advantage of the opportunity to send in his name at once to the secretary, as we believe that all railroad surgeons should be members. The fees are nominal. At the banquet that night the different railroads were represented by superintendents of the sections, and the occasion was one long to be remembered.

THE TANGIPAHOA PARISH MEDICAL SOCIETY met in Amite City, July 19, at 2 P. M. Salvarsan was the topic of the afternoon. An excellent paper was read by Dr. Jos. Copfler, introducing the subject. Several new members have been added to the list.

PERSONALS.—Dr. Howard D. King has left for Europe, to do post-graduate work in internal medicine and tropical diseases.

Dr. George S. Bel has resigned from the Board of Administrators of the Charity Hospital, and Governor Sanders has appointed Dr. Marion Souchon to fill his place.

Thomas Henry Watson, of Louisiana, was nominated by President Taft to be a first lieutenant in the medical reserve corps of the army.

Fire destroyed the residence of Dr. J. H. Kennedy, of Pinola, Miss., the loss of which is estimated at about \$1,500.

Dr. K. Winfield Ney, of Madisonville, La., has leased the Hammond Sanitarium.

Col. L. F. Marbury, of Ruston, La., has purchased the Ruston Sanitarium.

Dr. J. L. Brock, of Franklinton, La., has been appointed president of the local Board of Health.

Drs. Benjamin H. Talbott and Joseph H. Pankey have been appointed members of the Board of Health of Dodson, La.

Dr. Hugo A. Gabert, of New Orleans, on the occasion of the twenty-fifth anniversary of his entrance into the profession was given a silver service by the Firemen's Charitable and Benevolent Association.

REMOVAL.—Dr. H. F. Lemoine has removed from Morrow, La., to Cottonport.

MARRIED.—On June 22, 1911, Dr. S. T. Pulliam, of Houston, Texas, and Mrs. Irene Odom, of Crowley, La.

On June 15, 1911, Dr. F. R. Gomila and Miss Irene Frazier, both of this city.

DIED.—On July 8, 1911, Dr. William Jones, one of the leading physicians of Natchez, Miss.

On July 8, 1911, at Fort Worth, Dr. J. E. Francis, recently of Cleburne, aged 55. He graduated from Tulane in 1898.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of respective publications. The acceptance of a book implies no obligation to review.

Practical Medicine Series—Vol. IX. Skin and Venereal Diseases, etc. (W. L. BAUM, M. D., and HAROLD N. MOYER, M. D.) Year Book Publishers, Chicago.

Many valuable articles are succinctly reviewed and abstracted, dealing with diagnosis and therapy of skin diseases, syphilis, etc. One chapter is devoted to Genito-Urinary Surgery, and a final division of the volume takes up miscellaneous topics of educational interest. DYER.

Hydrotherapy, by GUY HINSDALE, A. M., M. D. W. B. Saunders Company, Philadelphia and London.

This work is timely, and fully satisfies the need of a practical guide to methods in hydrotherapy. As with all similar texts, there is evidence of large dependence upon compilation for the material presented, but this does not detract. Baruch's book on hydrotherapy is more complete as a technical study, and Crook's book on mineral waters is more of a guide than the book before us; but the author has successfully covered the consideration of spas and hydrotherapy without burdening the reader with too exhaustive a presentation of either. DYER.

Prevention of Infectious Diseases, by ALVAH H. DOTY, M. D. D. Appleton & Co., New York and London.

An excellent summary of the information most needed by the practical sanitary officer in contact with diseases met with in every-day experience. While the book evidently is based upon the limited experience of the author, and is in nowise exhaustive (many diseases reportable in many communities being omitted), what is presented is carefully shown with a practical reasoning. DYER.

Hughes' Practice of Medicine. Tenth edition. Revised and Enlarged by P. J. SCOTT, M. A., B. C. L., M. D. P. Blakiston's Son & Co., Philadelphia.

Welcome, old friend! Your soft and flexible covers, with ready reference arrangement, still finds itself in your rejuvenated form. We of another generation remember you just that way, and if some kindly hand like that of your present editor will bring you always up to date, our children's children may also welcome you. No one ever accused you of an academic philosophy, nor of new-fangled ideas, and even now some old familiar formulæ will stick on your pages, spite of the laboratories and the commercial drug emporiums indulging in sera on the side. The every-day

practitioner must find some place for you as a *vade mecum*, and even we who have been weaned from ancient worship will now and then secretly thumb your pages, sighing after the compounds and long formulas, which often helped to cure, even if they have become contraband. Live on, "old Hughes," and come often to our tables in a new habiliment, but keep your outside dress—for auld lang syne!

DYER.

What Shall I Eat? A Manual of Rational Feeding, by F. X. GOURAUD.
Translated by FRANCIS J. REBMAN. Rebman Company, New York.

A practical discussion of the status of the human animal in his relation to food. First showing the necessity for food and values of sorts of food, the author takes up, one by one, each kind of food and shows just what its value is and how it should be used in health and disease.

No better method was ever devised to give the average reader an insight of what food means, and, as a guide to the dietician, it must serve an excellent purpose.

DYER.

A Radiographic Atlas of the Pathologic Changes of Bones and Joints, by AMÉDÉE GRANGER, M. D. The A. L. Chatterton Company, New York.

Seventy-eight plates illustrate this book, carefully prepared by the author from skiagraphs made in his own laboratory. Each plate is a high example of the art of radio-photography, and at the same time of the excellent reproduction at the hands of the publishers. Many varieties of injuries and changes in bones and joints are presented, and the atlas may readily serve as a reference guide to those interested in comparative relations of bone conditions, surgical and otherwise.

Aside from the artistic and practical value of the book, this product of a New Orleans worker should receive the commendation it deserves for its originality and its scope. His success must be ours.

DYER.

Golden Rules of Diagnosis and Treatment, by HENRY A. CABLES, B. S., M. D. C. V. Mosby Company, St. Louis, 1911.

This book is one of the Medical Guide and Monograph Series, published by the C. V. Mosby Company. It comprises aphorisms, observations and precepts on the method of examination and diagnosis of diseases, with practical rules for proper remedial procedure. It is an epitome. It has been prepared to meet the many urgent instances where ready reference is needed, and it is presented with a firm belief that it will assist the busy physician.

E. M. D.

International Clinics. Vol. I. Twenty-first Series, 1911. J. B. Lippincott Company, Philadelphia and London.

The usual abundance of rich material appears in this as in the other volumes which preceded it. But what adds still more to its value is that, being the first volume out in 1911, it contains a review of the progress of medicine during 1910—that is, a review of treatment by A. A. Stevens, M. D.; of medicine by John Musser and Lucius Tuttle, and of surgery by Joseph Colt Bloodgood, M. D.

E. M. D.

A Text-Book of Genito-Urinary Diseases, by DR. LEOPOLD CASPER. Translated and edited by CHAS. W. BONNEY, B. L., M. D. Second edition.

P. Blakiston's Son & Co., Philadelphia.

This is one of the serious works on genito-urinary diseases, and we need only reiterate our endorsement of the previous edition, which comment related both to the writer and the translator, to the text and the illustrations. This edition has been revised and enlarged, and can be, like its predecessor, "heartily recommended to our readers." C. C.

Enlargement of the Prostate, by C. MANSELL MOULLIN, M. D., F. R. C. S. P. Blakiston's Son & Co., Philadelphia.

This, the fourth edition, like the previous ones, treats in a concise way of the causes, effects, diagnosis and treatment of prostatic hypertrophy. The chapters on treatment include the local and general, the palliative and radical. All told, Moullin accentuates the value of palliation in the right cases, shows in what type the Bottini procedure is indicated, and weighs very fairly the pro and con of the mooted question, supra-pubic or perineal? Details of operations that have become of only historic interest have been omitted, and the whole subject has been brought up to date, making of the little volume a valuable and modern book. C. C.

The Sexual Disabilities of Man, by ARTHUR COOPER, M. D. Paul B. Hoeber, New York.

Based on a translation by the writer of a short monograph on the subject by Ultzmann, and which has been long out of print, this book is reinforced by what has been observed by the author during a long practice. Its size, about 180 pages, 12mo., precludes the possibility of its being exhaustive, yet it can be useful to the majority of practitioners who, as a rule, have a very vague idea of the subject. It includes a study chiefly of sterility and of impotence, including a classification and the treatment of both.

It is readable and practical, though concise.

C. C.

Merck's Manual of the Materia Medica. Fourth Edition. Merck & Co., New York, 1911.

This reference book contains a comprehensive list of chemicals and drugs, not confined to "Merck's," with their synonyms, solubilities, physiological effects, uses, doses, incompatibles, antidotes, etc.; a table of therapeutic indications, with paragraphs on bedside diagnosis, and of prescription formulas; a classification of medicaments, an extensive dose table, also a chapter on Urinalysis, and various tables, etc. Sent to physicians, or to students enrolled in any college of medicine in the United States, on receipt of ten cents for forwarding charges.

Publications Received.

W. B. SAUNDERS & CO., Philadelphia and London, 1911.

Hospital Management, edited by Charlotte A. Aikens.

A Text-Book of Medical Diagnosis, by John M. Anders, M. D., Ph. D.,

LL.D., and L. Napoleon Boston, A. M., M. D.

What to Eat, and Why, by G. Carroll Smith, M. D.

Practical Cystoscopy, by Paul M. Pilcher, A. M., M. D.

J. B. LIPPINCOTT COMPANY, Philadelphia and London, 1911.

International Clinics. Volume II. Twenty-first Series, 1911.

MISCELLANEOUS.

The Twenty-first Annual Report of the Eye, Ear, Nose and Throat Hospital, New Orleans, La., for the Year 1910.

Smallpox in the United States, by John W. Trask. Public Health Bulletin No. 61.

A Note on Smallpox in the Philippine Islands, by Victor G. Heiser; *Smallpox and Vaccination in Cuba*, by P. Villoldo. (Washington Government Printing Office, 1911.)

Report of Poliomyelitis Committee of the Medical Association of the District of Columbia. (Washington Medical Annals, Vol. 10, No. 2.)

Actas Y Trabajos del Segundo Congreso Medico Nacional, Habana. Febrero 24-28, 1911.

American Life-Waste: Where and How It is Increasing. (Published by the Postal Life Insurance Company, New York.)

Essentials of Ophthalmology, by W. S. Sims, M. D. (Tucker Printing House, Jackson, Miss., 1911.)

Population of the United States in 1910, by Henry Gannett. (American Book Company.)

Reprints.

The Increase of Insanity, by J. T. Searcy, M. D.

Arterial Ligation for Irremovable Cancer of Pelvic Organs—Technic Adapted and Amplified, by William Searman Banbridge, A. M., Sc. D., M. D.

The House-Fly as a Carrier of Disease, by Edward Hatch, Jr.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans
FOR JUNE, 1911.

CAUSE.	White.	Colored.	Total.
Typhoid Fever.....	6	10	16
Intermittent Fever (Malarial Cachexia)	1	3	4
Smallpox.....			
Measles.....	3		3
Scarlet Fever.....			
Whooping Cough.....	10	5	15
Diphtheria and Croup.....	1		1
Influenza.....		1	1
Cholera Nostras.....	1		1
Pyemia and Septicemia.....		2	2
Tuberculosis.....	35	45	80
Cancer.....	18	7	25
Rheumatism and Gout.....	1	2	3
Diabetes.....	3		3
Alcoholism.....	1		1
Encephalitis and Meningitis.....	5	2	7
Locomotor Ataxia.....	1		1
Congestion, Hemorrhage and Softening of Brain.....	9	7	16
Paralysis.....	13	3	16
Convulsions of Infants.....		2	2
Other Diseases of Infancy.....	13	8	21
Tetanus.....	2	3	5
Other Nervous Diseases.....	3	3	6
Heart Diseases.....	55	34	89
Bronchitis.....	6	3	9
Pneumonia and Broncho-Pneumonia.....	9	10	19
Other Respiratory Diseases.....	1		1
Ulcer of Stomach.....	2		2
Other Diseases of the Stomach.....	3	5	8
Diarrhea, Dysentery and Enteritis.....	52	28	80
Hernia, Intestinal Obstruction.....	4	2	6
Cirrhosis of Liver.....	8	1	9
Other Diseases of the Liver.....	3	4	7
Simple Peritonitis.....			
Appendicitis.....	5	2	7
Bright's Disease.....	40	25	65
Other Genito-Urinary Diseases.....	6	6	12
Puerperal Diseases.....	6	4	10
Senile Debility.....	4	3	7
Suicide.....	2		2
Injuries.....	24	16	40
All Other Causes.....	19	12	31
TOTAL.....	375	258	633

Still-born Children—White, 21; colored, 19; total, 40.

Population of City (estimated)—White, 272,000; colored, 101,000, total, 373,000.

Death Rate per 1000 per annum for Month—White, 16.54; colored, 30.65; total, 20.36.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 29.98
Mean temperature 83.00
Total precipitation .. 6.23 inches.
Prevailing direction of wind south.

New Orleans Medical and Surgical Journal.

VOL. LXIV.

SEPTEMBER, 1911.

No. 3

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a **WRITTEN** order for the same accompany the paper.)

Some Suggestions as to the Etiology of Pellagra.*

By **CHILTON THORINGTON, M. D.,** Montgomery, Ala.

Accurate knowledge of the etiology of a disease is indispensable to its control, cure and prevention. Owing to a lack of such knowledge numerous epidemics of the past ran their disastrous course. Yellow fever alone has killed enough people to sufficiently populate the vast areas it has swept. Probably many who are here to-day have fought the disease in more than one of its visitations, and scarcely would it be possible to forget the epidemic of 1878, when the Gulf States and Mississippi Valley, up to Cairo, Ill., were visited with so malignant a type of the disease as to cause death even among the wild and domestic animals. Yellow fever had its birth in the West Indies, and its death in the discovery of its etiology.

Malaria flourished for centuries because of the mistaken notion regarding the mode of its contraction and transmission. Such

* Read by title at the Eighth Annual Meeting of the American Society of Tropical Medicine, held in New Orleans, May 18-19, 1911.

prophylactic good as accrued from efforts directed against its extermination was altogether accidental or incidental—such as draining ponds, swamps, etc., in order to dispel the miasma. The mosquito was regarded as an annoyance only, but the miasma was looked upon as a concentrated essence of bodily ills, if not the precursor of certain death. Malaria has laid tribute upon more territory than any other disease, and, according to respectable authority, more than one empire has tottered and fallen into decay before its scepter. The disease was born, we know not where, but, like yellow fever, had its death in the discovery of its etiology, inasmuch as recent findings have put it well within the province of man to decide whether or not the disease shall be relegated to the sphere of historical interest only. The end of the nineteenth century would appear to be far too late to have definitely located the causation of these diseases—that is, their origination from the mosquito. The price paid for this knowledge is so dear that all that is saved alone compensates for it.

Now that the South is saved from yellow fever, and has practically received the capitulation of malaria, has “thymolized” the willing and the unwilling, she is in better condition to deal with our obtrusive foe, pellagra, who comes to us a stranger with strange mien and ways. Most earnestly do we of the South invite the assistance that has hitherto so cheerfully been lent us by our brothers from the North, East and West in our fight with this wily foe.

I now take up the subject for discussion without further prefatory remarks, except to acknowledge the lack of opportunity to gather experimental data supportive of reasoning by analogy; but, after all, to reason by analogy needs no apology, for close analogy on the one hand might prove more convincing in the absence of confirmatory proof than the “*post hoc ergo propter hoc*” on the other.

It would, indeed, be folly to treat lightly the researches of Lombroso, Marie, Lavinder and others who have produced such persuasive, but not convincing, testimony against corn, and whether they be able or not to establish indubitable evidence in support of their claims—which remains to be seen—their labors are valuable contributions to science and are large assets to the medical profession.

The probe of scientific research seems to have found entrance into new channels, and with its percipient point is feeling here, there and yonder for facts to account for yet unexplained phenomena; new schools sprang up as the behavior of pellagra would frequently not conform to what was expected of it according to the prophecy of the Zeists; indeed, it became necessary to improvise a special name for certain cases "doing stunts" utterly inexplicable on the hypothesis of a disease attributable to any form of food; these cases they called "pseudo-pellagra."

However difficult it might be to trace the evolution of the maize theory from its incipency to the present day teachings, a sufficient number of glazes still remain to indicate the route taken by the Zeists while yet wandering in the maze of uncertainty. Whether pellagra antedated the introduction of corn into Europe is not recorded, therefore, that valuable point can never be proved. The germ and parasitic origin of diseases was not then dreamed of, so it became necessary to cast about for the cause for such a distinctive disease; the firmament, the seasons, the weather, habit and food all received their share of investigation, but, as is to be expected, food alone stood condemned, and naturally so, offering more points accounting for the symptomology and epidemiology of the disease. Maize being the article of food most generally used, especially by the poor, who seem particularly vulnerable to pellagra, received the closest investigation, and gradually prejudice, as hard to dispel as the miasmatic theory of malaria, increased until the theory was wellnigh universally accepted. The indictment against corn was not that it caused pellagra by virtue of any poison it contained, but, according to Marzari, the disease was the direct result of the continued use of the grain and due to its paucity of prerequisites. However, subsequent analysis convinced even Marzari to search the grain for new discovery. Following this Balardini succeeded in collecting a hyphomycete (*sporosorum maydis*) which furnished sufficient material to establish another school of thought, the "Zeitoxics," who succeeded in extracting from spoiled corn many watery, alcoholic and oily extracts declared to be causative of pellagra. Although the injection and ingestion of these extracts caused some very interesting pathology, yet to call it pellagra is as far from truth as is the "motion picture" from real life.

To attempt to compile all the objections to the corn theory

would be in excess of the limits of this paper; however, a review of the most important discrepancies is helpful and conduces to clearness.

Experiments hitherto made with corn have, in the main, been confined to the lower animals; this being true, much that is to be desired in the way of experimental data is necessarily lacking. Corn, whether sound or spoiled, fed to lower animals, has furnished not a single proof deserving of serious consideration, and the school which still insists that the grain is a cause of pellagra is itself having intestine wars.

Lombroso endorses the claim of von Deckenbach, who affirms that cultures of *oospora verticelloides* produces phenomena in animals similar to that of pellagra. But in offering explanations why rabbits, when fed on sound corn by himself and Audenine died, he has the following to say: "Many scientific inquiries are raised as to the possibility that pellagra may originate from sound corn. With Dr. Audenine I carried out a series of experiments upon animals with the result, to be sure, that rabbits fed on sound corn died after a certain time, but I am satisfied myself that our results demonstrated the fact that we were dealing not with a poison derived from corn, but with the impossibility of adapting the food used, a grain, to the natural requirements of herbivorous animals." Why did not Lombroso drop that hint before endorsing Deckenbach's claims? In other words, if sound corn killed rabbits in his own experiments, because of impossibility of adapting the grain to the requirements of herbivorous animals, why should not sound, or unsound corn, plus the oospora, cause various manifestations of death?

Corn to cause pellagra, according to most authorities, must be gathered and cured during damp seasons. It is stated that, following these seasons, the disease is most prevalent. However true that may be, it is equally true that damp seasons give occasion for increased numbers of mosquitoes.

Should Sambon's statement be true, that pellagra is found where corn is neither cultivated nor eaten, that of itself would wellnigh be proof sufficient against the specificity of the grain. In one of my own patients, with a well-developed case of pellagra, she positively denied eating corn products since adult life.

The geographical distribution of pellagra is most interesting,

and for our purpose shall use the list as given by Marie. His distribution of cases in the United States is as follows:

ENDEMIC AND CASES RELATIVELY NUMEROUS: Virginia, North and South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Texas, Tennessee and Illinois.

ENDEMIC AND CASES FEW: Pennsylvania, Maryland, Kansas, Arkansas, Oklahoma, Kentucky, California.

SPORADIC OR DOUBTFUL: Massachusetts, Iowa, Ohio, New Mexico, Colorado (?), Missouri, Vermont, Rhode Island, West Virginia, District of Columbia, New York (imported cases), Indiana, Wisconsin, Washington and Michigan.

This reminds one of a printed diet list, and would appear to have been made especially for the peculiar requirements of yellow fever and malaria; showing what States they may or may not partake of. But where are the great Western corn States? Do they appear in the list of Southern States where "endemics and cases are relatively numerous"? Does the West keep back her sound corn and send the unsound to the South? Not only is the geographical distribution of pellagra tropical and sub-tropical, but it is possible to make the line of demarcation more arbitrary. Within a State pellagra is more common in the rural districts than in the towns and cities, and, at least in our locality, more common suburban than urban. This must assuredly be due to a more insanitary and unhygienic condition of the rural districts as compared to that of the city; in other words, it is quite possible that drainage is better in the city than the rural districts. The poorer classes seldom live in screened houses or sleep under mosquito netting.

Seasonal changes are most characteristic of the disease. Spring and autumn furnishing the most cases. The following is a list of deaths reported from pellagra in Alabama for the years of 1909-10:

1909.		1910.	
January	1	January	10
February	1	February	10
March	0	March	12
April	3	April	12
May	9	May	21
June	8	June	21

1909.		1910.	
July	8	July	22
August	8	August	39
September	15	September	29
October	17	October	31
November	18	November	21
December	24	December	18

This list, although including only 360 cases, shows a rapid increase of death with the advent of spring and a corresponding diminution during winter. Such periodicity is not reconcilable with the record of deaths occurring as results of a toxic myelitis induced by spoiled corn.

The reason why so many pellagrins are found in asylums for the insane is that insane pellagrins are committed to them the same as those afflicted with other forms of insanity; but this does not explain why so many cases seem to have their origin there as well as in many of the other eleemosynary institutes.

Samson's theory that pellagra is caused by the bite of the sand fly (*simulium reptans*) is questioned by L. O. Howard, chief of the Bureau of Entomology, Department of Agriculture, U. S. He states that the *simulium reptans* does not occur in this country; however, there are twenty-seven other species. He believes Samson is incorrect in his conclusion.

The habitat of the sand fly does not correspond so closely to the distribution of pellagra as does that of the mosquito.

Pellagra is frequently accompanied by such diseases as amebiasis, anchylostomiasis, malaria, etc., all of which, according to the doctrine "*noscitur a sociis*," tends to point to its parasitic origin.

The most successful treatment of pellagra, thus far, seems to be that adopted on a hypothetical parasitic, and not zeitoxic, concept. Arsenic and quinin are helpful, if not curative, in many cases.

When pellagra was first beginning to cause concern and alarm in Alabama, corn products were regarded with much suspicion, and as a consequence the consumption and sale of corn meal was seriously threatened. For this reason, as well as others, I published an article (August 25, 1909) which subsequently was republished in the *Gulf States Journal of Medicine and Surgery*, January, 1910, and, so far as I am aware, is the first published specifi-

cally pointing out the mosquito as causing pellagra. The article reads as follows:

"Now that pellagra has broken through its indigenous confines of foreign countries and has found its way into the United States, it has given occasion for much discussion, not merely because of the pernicious tendencies of the disease, but also because of the incriminating evidence supposed to have been obtained in favor of diseased maize or corn as the causative factor of the malady. Pathologists would do well to direct their attention towards the obscure etiology of this disease, inasmuch as the present theory of diseased meals meets the indications but in a measure; therefore, to put a stigma on a commodity so indispensable as corn and its products will inevitably cause incalculable harm to the planters and unwarranted hardship upon those denying themselves of that which heretofore has constituted their chief article of diet. There are many families in Montgomery, and probably all over the South, who have given up the use of meal because of its association with pellagra. If the medical profession is not able, within a reasonable time, to establish the fact that diseased meal plays no part in the causation of pellagra, permanent prejudice will become established in the minds of those who are timid or skeptical.

"If pellagra were caused by eating diseased meal the occurrence of the disease would not have been restricted to certain localities, but might be looked for with as much probability of finding it in one country as in another—that is, wherever corn is extensively cultivated and used for food. The occurrence of the disease in the United States would not have been so delayed, neither would it have waited until the disease was introduced here, but would have been co-existent with the occurrence in the countries bordering on the Mediterranean Sea, and in Mexico and Yucatan. During the Civil War, when soldiers' rations consisted largely of corn meal—and the article was not so good then as in these days of pure food laws—had the diseased meal the property of causing pellagra, there probably would not have survived a sufficient number of soldiers to take up the work of rehabilitating the South, nor would there be a sufficient number of negroes to give rise to the race problem. The people of the Western and Southern States are liberal corn-eaters; in fact, corn in some of its various combinations and preparations furnishes many their 'daily bread,' and has been doing so for over a hundred years, and yet it does not appear to have given rise to symptoms characteristic of pellagra. In 1883, Sherwell reported the first case known to have reached the United States. The patient was a Genoese sailor coming into the port of New York. Subsequent to this, sporadic cases have been brought to light, but not until 1906 does it appear that anything like an epidemic of the disease has ever occurred in this country, when, at the Mount Vernon Insane Hospital, for negroes, according to the statement of Dr. George H. Searcy, there occurred eighty-eight cases, the epidemic being started from a few patients brought there from Tuscaloosa. Other like institutions seem to have had their share of pellagra, and that the asylums should experience more cases than are found elsewhere is no argument in favor of unsound meal being causative of pellagra, as it is unreasonable to suppose that the meal bought by, or sold to, these institutions is of inferior quality to that used generally.

"With my limited experience with pellagra I trust that it will not be considered presumptuous should I venture a suggestion as to the probable cause of pellagra, or question the present teachings as relate to diseased meal, as I find facts associated with pellagra more than suggestive of blood parasitism, which, of course, would intimate an intermediate host of some kind, possibly the mosquito, as this insect, more than any other, has the

distinction of causing and disseminating many definite diseases, among which we might mention yellow fever, malaria, dengue, elephantiasis, etc., and each year will probably add new, or old, diseases to the list of those already known to be caused by the mosquito.

"In support of the parasitic origin of pellagra, we need only briefly review the peculiar characteristics of the disease:

"First, it appears to be infectious. Dr. J. M. King, of Nashville, Tenn., reports eleven cases occurring in an institute of charity at Nashville as the result of one case having been brought there.

"Second, the clinical course of the disease closely conforms to that of other parasitic diseases, and not that caused by grain poisoning.

"Third, there is a periodicity about the development of pellagra, the spring causing it to become active after having passed a stage of latency during the cold weather.

"Fourth, its geographical distribution—tropical and subtropical—is that of other diseases of parasitic origin.

"While I make no effort to establish any relationship between pellagra and malaria, I will merely compare the two diseases, because malaria, being a parasitic disease, has many symptoms closely resembling those of pellagra. A few of the most conspicuous symptoms of pellagra are stated to be malaise, headache, vertigo, ringing in the ears, spots before the eyes, conjunctivitis, either salivation and sore mouth or dryness of mouth and tongue, gastric disturbances, diarrhea (however, this may occasionally alternate with constipation), disorders of vision, paralysis, and a characteristic skin eruption which makes the appearance on those parts of the body exposed to the sun's rays, as on the back of the head, feet, face and neck. There is usually or frequently slight fever; however, as a rule, the fever stands in the background. Nervous manifestations are various and serious, frequently mental alienation being a distal result of the disease, should death fail to interrupt the process before reaching that stage. Now malaria may cause any or all of these symptoms, even the eruption, in some cases, being in a degree simulated, as where it is accompanied with herpes zoster when restricted to the hands, face and neck. That the eruption is localized in pellagra is no disproof of its parasitic origin, and may be as hard to explain as is the gigantic swelling of elephantiasis, caused by the blocking of lymphatics by a parasite called filaria, which is injected into the circulation of man by the mosquito, *Culex fatigans*.

"It is quite significant that the only treatment that has proven of any service in chronic forms of malaria is the treatment of most service in pellagra.

"In view of the great mutability of all theories, one must be ever cautious in accepting them, unless by the advancement of science they are placed among the treasured facts. Malaria existed many decades under the mistaken etiology of 'bad air,' or miasm; in fact, from this derived its name, and since it has been absolutely determined that the disease is due to a blood parasite (*Plasmodium malariae*), malaria is now a misnomer. Should any further facts be disclosed as to the cause of malaria, it will be an addition to science, and will in no wise weaken the present accepted views.

"It is true that the specific organism has as yet not been determined, but this may be due to staining difficulties, as was the case in yellow fever and many other diseases.

"Until something more definite is learned of the cause and dissemination of pellagra, I am strongly of the opinion that pellagrous patients should be securely screened from the bites of mosquitoes. This is not intended as a suggestion to those in charge of such cases, for I am confident that all necessary precaution is being taken by them, but a few doubtful cases may never come to the notice of the medical profession.

Just as malarial cases carry with them the blood parasite—hemameba—and the same may be transmitted to others through the agency of the mosquito, acting as the definitive host, so it may be possible for pellagrous patients to have in their blood some form of parasite, or protozoa, which, when injected into the human body, cause definite symptoms of pellagra.

"The best interests of our section, and of the country generally, require that a commodity of such necessary and universal use should not be condemned except upon the most satisfactory scientific proof, and I merely offer the foregoing suggestions with the hope and belief that further investigations will relieve the producers and consumers of corn from the losses the present theory will entail."

In conclusion I wish to make a suggestion whereby innocent and useful lives might be spared while experimenting in the direction of the hidden etiology of pellagra. If it were possible to legalize such a method, condemned criminals should be used for humane experiments. If the Constitution could not be changed, then, upon promise of the Governor, or Pardoning Board, a commutation of sentence to such criminals as would consent to humane experiments, I am sure all material desired would be forthcoming. Such criminals would far better serve the human race than by digging coal, or as feasts for worms. Having this material, let the Zeists and Zeitoxics cultivate, gather and cure corn in every conceivable way said to cause pellagra. Let Balardini's *sporosorum maydis* be tried; Ceni's *aspergillus fumigatus* and *flavescens*; also Besta's *penicillium glaucum*. Do not forget Tizzoni's *streptobacillus pellagrae*, although he may have done so. Have Sambon to bring over the sand flies and others the mosquitoes. Try all these out on the pellagrin and the criminals, as was done with yellow fever and malaria; this done, pellagra cannot longer keep secret the mystery of its etiology.

Report of Three Cases of Animal Parasites in the Urine.

By WILLIAM KRAUSS, M. D., Memphis, Tenn.

1. CASE OF TRICHINURIA. Mr. H. J., aged 50 years, capitalist, resident of Georgia, travels about the South a great deal. Was in Memphis from about September 28th to October 3rd, 1910. He consulted a friend, a prominent physician here, for "rheumatism." He was referred to me for an examination of his urine, with reference to excess of uric acid. A night specimen taken September 30th, and a morning specimen taken October 1st, were sub-

* Read by title at the Eighth Annual Meeting of the American Society of Tropical Medicine, held in New Orleans, May 18-19, 1911.

mitted. The findings are shown on the original chart shown here. The acidity was 75 and 85 respectively; the urates, taken with the uricometer, show .16 and .18. Test for albumin by heat and acetic acid was practically negative. It is my custom to report negative when the blood elements present can account for the reaction, as otherwise the report is generally misunderstood. The casts in both specimens were few, two forms being recorded in one, and four in the other. A few white blood cells were found in the rather small sediment of both specimens; there may have been a few red cells, but no record was made for the same reason as in the case of the albumin. What attracted attention at once in the sediments of both specimens was the presence of several motile filariform embryos, not sexually differentiable. Taking the size of the field as measured by the Thoma-Zeiss counting chamber, these were about 0.5 to 0.7 mm in length and 0.03 mm in transverse diameter. One appeared to show a few transverse striations posteriorly but no projections such as seen in the mature male. The filaria were slightly thicker and more blunt at one end; the coelom showed a darker portion occupying the middle third, but otherwise indistinguishable. The number of parasites in the two specimens was probably from 30 to 40. There were perhaps twelve or more of them counted, several of them being motionless, the rest squirming with variable activity. Several slides were mounted in solution of chloral hydrate and rimmed with balsam, but later it was discovered that they had run together, the mounts having been kept on a shelf too close to the radiator.

After finding these filaria, which clearly did not correspond to the morphology of the filaria sanguinis embryos, nor to filariform anguillula, the latter of which I see rather frequently in feces, I reported to the doctor, and the patient kindly presented himself at my office. He stated that he traveled around a good deal, stopping at the best hotels available in the places visited; that he was very fond of broiled ham, and that he liked it very rare. He said that this had been his habit for some years, but denied ever having had any marked gastro-intestinal disturbance, epigastric distress or other characteristic symptoms. He admits having had slight fevers, but attributed these to "malaria." He also denied having had any localized edemas or puffiness. There are said to have been abnormal sweats, and his description of possible skin

manifestation is vague. He declared rather emphatically that he was in the best of health and that he was only bothered with muscular rheumatism. He treated my discovery of parasites with amused surprise and answered questions rather indulgently. A rather unsatisfactory examination revealed no superficial edema or points of soreness. There was some soreness on deep pressure over the insertion of the deltoids and on several points on the trunk. Soreness in the lower extremities was declared to be due to rheumatism and had been present periodically for several years. The knee jerks were apparently normal. He denied difficulty in mastication, phonation, deglutition or respiration.

It was also impossible to determine any starting point for the present condition. The patient is well nourished, is a man of great affairs and always "on the go." His only complaint is "muscular rheumatism" and occasional "backache, like lumbago." He claims to have had this with remissions and complete intermissions for years.

In view of this finding, the slides were examined again and also shown to other physicians. Unfortunately they were mostly willing to "take my word for it." All the illustrations and descriptions in the books available convinced me that I had immature embryos of trichinella.

A specimen of stool could not at this time be obtained, and the next day the patient left the city. A smear of blood was taken on this day (October 2nd) and stained with Giemsa stain. Four hundred leucocytes were counted at the lateral fringe. The original record card is here shown. It shows s.l., 21.75; l. m., 4.5; p. n., 65.5; eos., 8.0; bas., 0.25; my., none.

This finding would simply correspond to a mild helminthiasis. I have been unable in the time available to find anything in the literature bearing on this case. There is no evidence of chyluria and there has been no hematuria. As to the mode of entry into the urinary tract I am unable to offer any information. The lymphatics of the urinary bladder are sparing and practically confined to the musculature. It is known that the bladder mucosa is not an absorbing surface, and indeed this is quite imperatively necessary. The patient positively denies having had any pains, strangury, hypogastric uneasiness or frequent micturition. The scant trace of albumin and the very few blood elements indicate no

evidence of local inflammation in the urinary tract. In the only other three cases of parasites in the urine that I have observed there was hematuria. If entry had been gained through the lymphatics of the prostate gland, the local symptoms could not have escaped the patient. The only plausible hypothesis is that the embryos passed from the lymphatics of the wall of the renal pelvis, and that this was the cause of the "lumbago."

I regret exceedingly not to be able to show the parasites. I made an effort to dissolve the balsam out of the mounts with chloroform but failed to save the specimens by any of the treatments that suggested themselves.

CASE 2. Mrs. M., patient of Dr. Holder. Came from a small town in Arkansas, entering the hospital for frequent hemorrhages. The first examination was made on October 21, 1910. The urine examined merely for contraindication to anesthesia did not, so far as could be told from the superficial examination for casts only, show any parasites or ova. On account of the blood finding, no operation or examination (for supposed hemorrhoids) was undertaken. This blood showed 42% hemoglobin, measured by Dare's instrument. There was 1% eosinophiles recorded.

On November 17th another specimen of blood showed 58% hemoglobin; the patient was anxious for some relief, as she wanted to go home. The urinary sediment at this time showed several ova of *Bilharzia*. This finding being rather unique, further questioning brought us no closer to the possible source of infection, except that a troupe of "Streets of Cairo" people had exhibited at a street fair close by. The ova, which were about a half dozen to the slide, had the characteristic polar thickening, with a sharp spicule at one end. Some had broadened and showed the beginning formation of embryos. The size and shape corresponded exactly. A specimen of feces obtained the next day was searched in vain for parasites or ova. She denies ever having had hematuria, but on account of frequent bleeding at stool she may be honestly mistaken. The one specimen of urine was distinctly blood-tinged and there was no hemolysis.

A letter was written to Dr. Flexner detailing the findings and asking his judgment with respect to the possible benefit to be derived from a dose of salvarsan. Dr. Flexner advised against the use of it, and the home doctor was directed to give large doses

of soamin, interrupting the treatment from time to time and carefully watching for optic nerve symptoms. No further history has been obtainable. The party has not paid for the medical services rendered by Dr. Holder, and this probably accounts for the silence.

After the St. Louis Fair several cases have been mentioned in the literature, and many others were of doubtful authenticity. In the Transactions of the Tennessee Medical Society (1908) the late Dr. T. J. Happel read a paper on "idiopathic non-malarial hematuria." In the paper and the discussion, and also in the discussion of a paper before the Southern Medical Association at Birmingham, the following year, several cases were spoken of. In the discussion of papers on cystoscopy it was said that such ova had been found, but the most careful search of the sediments of quite a number of cases of so-called idiopathic hematuria I have regularly failed to find the ova. Some specimens of supposed embryos of *filaria sanguinis hominis* were found by me to be something else, usually hairs, threads of fibrin, etc. Several pictures of *Bilharzia* ova were readily identified by me as "whetstone" crystals. Having observed any number of "strange things" in quite a large number of microscopic examinations of urine, including larvæ of *Compsayia macellaria*, *Acarus scabiei*, *Tyroglyphus longior*, etc. Only a few days ago a sample of urine was sent me by a physician in a nearby town. The patient is a blacksmith and has "idiopathic hematuria." The urine contained about 10% of blood, and in the sediment several examples of oxyuris were seen. Another specimen has been requested, but thus far it has not been received. This is all I am in a position to report at this time.

Salvarsan and Syphilis.

By GILMAN J. WINTHROP, M. D. and H. P. COLE, M. D., Mobile, Ala.

The extensive use of salvarsan, or "606," in the treatment of syphilis and the voluminous literature which has arisen, suggests a resume of the subject.

Final conclusions as to the true value of salvarsan in syphilis are not yet possible. Careful observation of the cases treated can alone determine the effects of a single, and necessity of repeated

injections, can alone answer the question of the frequency of relapse and permanency of cure; can alone show the results of the treatment on the so-called parasymphilitic affections.

The immediate effects of salvarsan in preventing the extension of the primary lesion into a general spirochetosis, in checking the secondary manifestations and the destructive lesions of tertiary syphilis, and the beneficial results on the existing cachexia, all these fully warrant salvarsan administration in selected cases.

It must be fully appreciated that the "sterilisatio magna" of Ehrlich is rarely possible from one, perhaps from several, administrations of the drug. Repeated injections should be practiced until clinical evidence and the Wasserman reaction are permanently negative. We must disabuse the lay mind of the belief that one dose of salvarsan absolves the patient's social and therapeutic debt.

ADMINISTRATION.—Salvarsan is described as a sulphur yellow powder. It is dispensed in sealed glass ampules, containing 0.6 grammes of the drug.

Salvarsan may be administered in solution or emulsion, either subcutaneously, intramuscularly or intravenously.

SUBCUTANEOUS ADMINISTRATION.—Wechselmann advised the use of a neutral emulsion or suspension of salvarsan for subcutaneous injection. The emulsions of the drug in oil and Alt's alkaline solution (noted below) have also been used subcutaneously.

Subcutaneous injection has fallen into disfavor due to the very slow absorption of the drug, the tendency to persistent induration and occurrence of sloughing at the site of injection.

INTRAMUSCULAR ADMINISTRATION.—Alt (1) advises a clear alkaline solution for intramuscular injection. The solution is prepared by thoroughly shaking the salvarsan with 5 or 6 c. c. of warm water in a glass-stoppered, graduated glass cylinder. A few c. c. (3 or 4) of a 4% sodium hydroxid solution are then added and the mixture well shaken. More of the sodium hydroxid solution is added drop by drop, with constant shaking, until a clear solution is obtained. The solution may be made up to 10 c. c. by the addition of normal salt solution. This solution is injected deep into the gluteal or lumbar muscles.

Kronmeyer (2) suggests the use of a sterile paraffin, or oil suspension, of salvarsan. The salvarsan is triturated with paraffin or

oil until a smooth mass is obtained. About 4 c. c. of oil or paraffin is required for each 6 decigrams of salvarsan. Absorption of this suspension is claimed to be as rapid as from the solutions.

Schindler (3), from Neisser's clinic, employs a mixture of salvarsan with lanolin and iodipin—"the latter a preparation of Merck's containing iodine in oil of sesame." This preparation, he claims, will keep unaltered for ten days.

Burke (3) suggests a 10% lanolin in olive oil emulsion, finding this amount of lanolin will hold the salvarsan in suspension. Two c. c. of this oil emulsion is well mixed in sterile mortar, with the salvarsan powder; this is drawn into a syringe, then 1 c. c. more of the oil is used to take up the remaining salvarsan adhering to the mortar. The entire amount is then administered intramuscularly.

While the intramuscular method was originally advised by Ehrlich, the pain, induration, and occasionally, the necrosis following it, have prejudiced against this mode of salvarsan administration.

Pain, from intramuscular injection, can be largely obviated by giving the solution or mixture in divided amounts, in several localities, thus avoiding too great distension of the tissues and promoting more rapid absorption.

Meltzer (4) suggests the sacro-spinal muscle as the one of election, and showed that injection into it gave rise to little pain, and that absorption was more rapid than from the gluteal group. Our personal experience would favor this view.

Necrosis will rarely occur if the strictest asepsis be observed and over-distension of the tissues guarded against. The danger of embolism from injecting the arsenical emulsions into a vein is readily prevented by careful preparation of the drug mixture and examining for leakage of blood from the needle before injecting the emulsion.

The slower rate of absorption from the intramuscular injections is to be desired in cases with cardiac and renal complications, severely cachectic individuals and atheromatous patients with high blood tension. In such cases the immediate saturation of the body fluids with salvarsan and with the toxins set free by the destruction of the spirochetes may lead to serious complications.

Believing that the intravenous route is the one of choice, we

must, however, favor the intramuscular injections in cases contra-indicating the often dangerous intensity of the intravenous method and in those cases demanding more continuous action of the drug.

INTRAVENOUS ADMINISTRATION.—Schreiber and Weintraub suggested the original methods of intravenous administration of salvarsan.

Schreiber (5) prepares his solution by shaking the salvarsan with 10 to 20 c. c. of hot water, in a 250 c. c. graduated cylinder, until the drug is completely dissolved. Warm sterile water or salt solution is then added to a volume of 100 c. c. Normal sodium hydroxid is now added in the proportion of 0.7 for every 0.1 of salvarsan and the fluid thoroughly shaken until the precipitate formed is completely redissolved. More of the sodium hydroxid solution is added until a perfectly clear solution is obtained. Finally, salt solution is added to 200 c. c.

Schreiber employs a special graduated container for the salvarsan solution, a syringe and a needle attached to a three-way stopcock. The syringe is filled by a rubber tube attached to the container, the stopcock is then turned and the solution forced from the syringe into the vein. By repeatedly filling and emptying the syringe sufficient amount of the solution is infused.

Weintraub (5) mixes the salvarsan with 30 or 40 c. c. of hot sterile water in a broad cylinder. When the drug is fully dissolved it is poured into a flask containing 200 c. c. of warm normal saline solution. This solution is now alkalized with fifth normal sodium hydroxid until the salvarsan is precipitated and again fully dissolved.

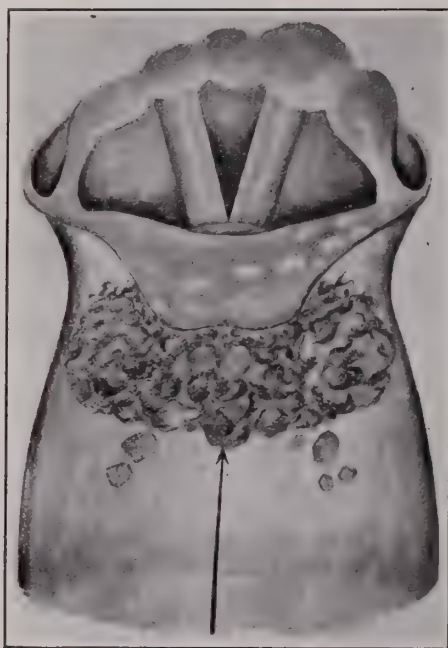
His apparatus for administering the solution consists of a thin glass cylinder or buret, connected by rubber tubing, with a specially designed needle.

These methods of intravenous administration have been modified by various individual workers. Any apparatus is satisfactory which will permit of thorough sterilization, prevents the possibility of air embolism, and by which the rate of flow is easily regulated.

The intravenous method is certainly to be advised when not specifically contraindicated. The solution is widely diffused throughout the body and rapidly acts on the various seats of infection. Pain, induration and possible necrosis are obviated.

Myocardial disease, nephritis, optic neuritis and severe cachexia





THE LINGUAL TONSIL (*Original Drawing*).

ILLUSTRATING DR. DUPUY'S PAPER.

contra-indicate the intravenous use of salvarsan, but in many of these cases the drug may, with safety, be given intramuscularly. The danger of air embolism, of infection and of dilatation of the right heart can be obviated by proper operative technic.

The rapidity of action and surety of immediate results from the intravenous method should not warrant its use in all cases. Careful examination of each patient must justify the intensive as against the slower intramuscular method.

The necessity of the most scrupulous asepsis in any method of salvarsan administration cannot be over stressed. Such adequate asepsis can only be had in a properly equipped hospital and assured by workers skilled in surgical technic.

Careful observation and records of the temperature, respiration, pulse, renal efficiency, etc., before and after salvarsan administration demand hospital residence for the patient for a few days before and after the treatment. Only by such records can the severity of reaction be determined, dangers of the therapy guarded against and combatted, and the most satisfactory results obtained.

Finally, let each case be studied most carefully. The necessity of repeating the treatment, the wisdom of combining mercurial and iodide therapy with that of salvarsan, and the final results from treatment, can only be determined by consistent study of each individual case.

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The Lingual Tonsil.*

By HOMER DUPUY, M. D., New Orleans.

Should this paper present the least value it will be due solely to its being a personal contribution, based on the writer's observation and study of some 200 cases presenting morbid alterations of the lingual tonsil. It has long been my desire to make such a contribution, as I have observed this tonsil to be a sort of terra incognita to the greater number of practitioners. Yet, when we realize the important part played by this lingual tonsil in throat

* Read before Orleans Parish Medical Society, July 10, 1911.

affections it will be admitted that this structure, though of minute dimensions when compared to the more generally recognized faucial tonsil, is an undoubted factor in throat pathology. Its enlargement will frequently explain a chronic dry cough, a scratchy feeling in the throat, a sensation of a weight in the throat, an alarming hemoptisis, and, lastly, vocal troubles in professional voice-users.

Note that we have four throat tonsils of pathologic import: The faucials, the pharyngeal (adenoid), and the fourth tonsil, the lingual tonsil. The situation of the lingual in the recess between the dorsum of the tongue and the anterior surface of the epiglottis renders it usually inaccessible to the ordinary methods of direct examination. It was the last of the throat tonsilar deposits discovered by the laryngoscope to be the seat of morbid changes. This explains its monopoly by the throat specialist, and yet, when this tonsil is diseased, its signals of distress are quite definite and interpretable. If we transfer the clinical picture of what occurs so frequently in the faucial tonsils when affected we then form an approximate idea of what occurs in the lingual tonsil. It becomes acutely inflamed, with the enlargement and redness peculiar to tonsilar affections; it may be primarily so, or it may be a secondary centre of infection in the general throat involvement. This tonsil may be the seat of genuine hypertrophy, and in extreme cases the growth may fill up the whole of the groove between the dorsum of the tongue, posteriorly and the epiglottis.

This tonsil is unlike other such structures in four respects: (1) Pain is not a prominent symptom in lingual tonsil inflammations; a burning sensation is usually complained of in the acute and subacute infections; a certain rawness about the throat may be experienced in swallowing, but the distressing dysphagia of faucial tonsilitis must be extremely rare; I have never observed it. Pressure over the hyoid bone may elicit some pain; the subjective sensations are usually referred to this region, but they are rarely intense in character. (2) Pus accumulations, similar to intra- and peri-tonsilar abscesses in the faucial region, are of rare occurrence. Only one case has come under my observation. Proximity to the larynx renders this form of lingual tonsil infection extremely serious, as laryngeal edema is a possible outcome. (3) This tonsil, in the writer's experience, has never been the seat of a diphtheritic implantation; this observation applies specially to the primary in-

fections. (4) The other tonsils, when diseased, are among the universally-accepted enemies to child-life. The lingual is more prone to behave morbidly between the ages of twenty and fifty. Yet it cannot be too strongly emphasized that childhood is not exempt from dry, hacking and spasmodic coughs—the direct result of lingual tonsil inflammations or of true hypertrophies.

While the other tonsils may bear the brunt of a greater majority of throat infections, the lingual is more frequently involved than is usually supposed. In the routine examination of throat cases unusual enlargements of the lingual tonsils are discovered, which, however, give rise to not the slightest symptoms attributable to this structure. Evidently the personal equation enters into the question of how much hypertrophy is actually morbid. In nervous and debilitated subjects slight enlargements have produced great discomforts, giving rise to symptoms which are really out of proportion to the apparent hypertrophy. The speedy relief which followed treatment proved sufficient demonstration that the cause of morbid effects need not be of giant proportions.

"Feels like a lump in the throat," the patient's own words, give us the index where to look for the seat of the trouble. "Feels at times as if I'm going to choke; I try to swallow the lump, but it does not go down." These are further expressions frequently heard. We at once recognize that there are subjective sensations similar to those present in the *globus hystericus*. Unquestionably there is such a manifestation of hysteria, but that quite a large number of cases dubbed "*globus hystericus*" are *pure hypertrophies of the lingual tonsil* is proven by the laryngoscope and by the rapid results following appropriate treatment. I believe it would be approximating the real figure to assert that 40 per cent. of so-called *globus hystericus* manifestations are lingual tonsil affections. I exclude those neurotic subjects in whom any treatment addressed to the throat will have a favorable psychic effect, thus relieving hysterical phenomena.

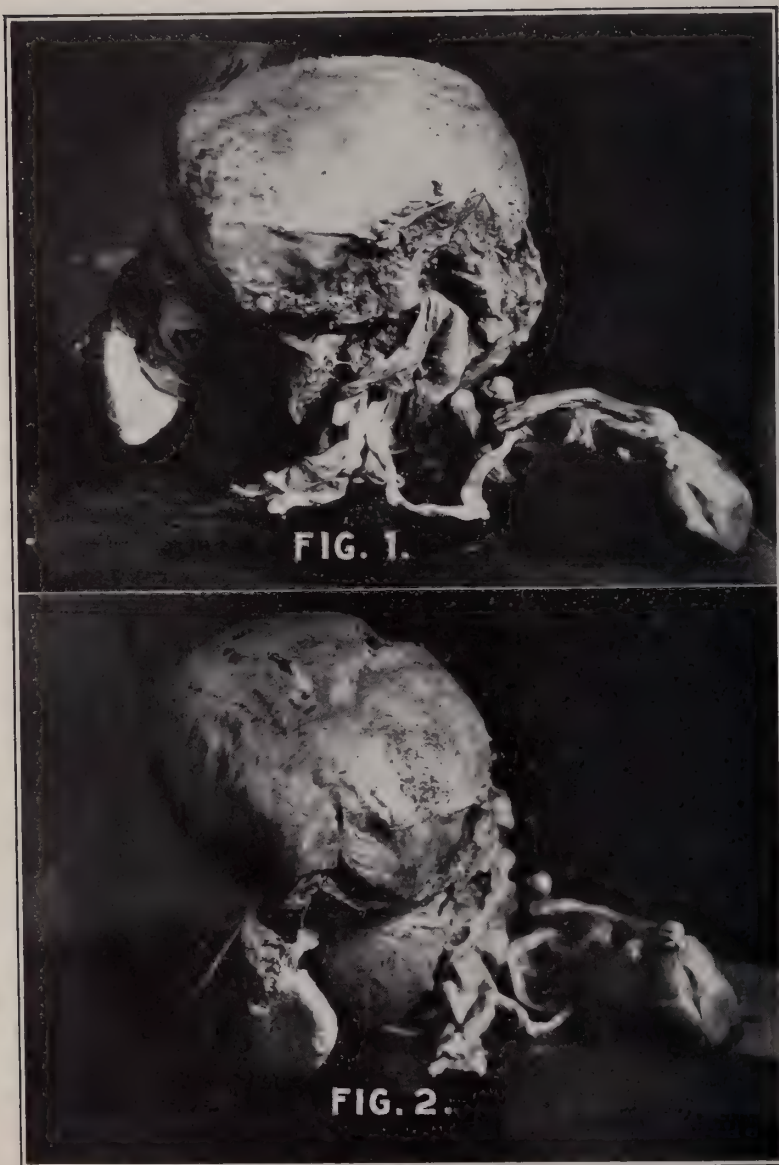
Dry, hacking, and sometimes spasmodic coughs, excited by tickling sensations in the throat, are frequently due to morbid changes in this tonsil. I have observed children between the ages of five and ten years, with distressing coughs which yielded only to treatment of an enlarged lingual tonsil. This structure, when hypertrophied, is especially the enemy of professional voice-users.

My case record shows a large number of singers. They presented vocal disability, with a constant clearing of the throat, in the hope of dispelling huskiness and to secure pure tonality. I have found the largest hypertrophies in singers. The influence of this tonsil in vocal disturbances is worthy of more extended observations.

The normal picture of the lingual tonsil region always discloses a venous plexus covering the parts. The veins are usually tortuous, unprotected, and stand out clearly in the tonsil deposits. They may be the seat of varicosity, particularly in older subjects, and may rupture from straining during violent coughing or vomiting, thus causing an alarming hemoptisis. We have, therefore, not exhausted our means of diagnosis in obscure hemoptisis until we have excluded a possible lingual varix.

The lingual tonsil has been spared the radical, and perhaps aggressive, surgery which is now our attitude towards the other tonsils. The enlargement is seldom of sufficient dimensions to make it feasible for excision, and the profuse, and perhaps dangerous, bleeding renders it inadvisable to resort to a cutting operation as a routine measure. The galvano-cautery, properly applied, will reduce the ordinary hypertrophies, and is equally effective in destroying the lingual varix. In the acute and subacute inflammations—the silver salts, iodized phenol and menthol, in spray form—are of undoubted efficiency.

I only wished to allude briefly to the question of treatment, for the express purpose of this contribution has been to emphasize that there is such a structure as the lingual tonsil, which, while a diminutive lymphoid deposit, is quite frequently the source of considerable distress, and that proper remedial measures afford the most gratifying relief.



SHOWING SEAT OF FETAL SAC (*Posteriorly*).

Large Sub-Mucous and Fibro-Myoma Complicating Pregnancy: Report of Case and Exhibition of Specimen.*

By C. WM. GROETSCH, M. D., New Orleans.

Fibromata, myomata or fibro-myomata, commonly known as "fibroids," constitute the most frequent neoplasms found in the human body. It is estimated that at least 20% of all women over 36 years of age are afflicted with one or more of these abnormal uterine growths.

They are most frequently met with in women who are sterile, nature seeming to compensate itself by producing an abnormal growth where the physiological function of the organ fails to take place.

But "fibroids" complicating pregnancy, or vice versa, are rather infrequent; and those cases in which surgical interference is necessary are rarer still.

Where pregnancy takes place, however, it usually occurs in cases of sub-peritoneal fibroids or small intramural growths, and but rarely in cases where the submucus type is present. Still, where the growth is small, usually sub-peritoneal in character and pedunculated, pregnancy may go to full term. The greater number, however, usually result in early abortion or miscarriage, depending upon the size of the tumor, the amount of abdominal space taken up, and extent of irritation to the uterus.

Surgical interference is required "only" in those cases where the cervix uteri is displaced and the fetal sac forced out of normal position, as was the case in this instance, making natural delivery impossible. We are not considering deformities of pelvis, etc.

Following case was sent to the Charity Hospital for diagnosis by her country physician, who frankly stated that he did not know what ailed her:

Mrs. X. Female, white, French extraction; country woman, aged 37. Married 7 months; no children; no miscarriages. Well nourished; general physical condition very good.

HISTORY.—Has always been rather stout. A few years ago noticed a hard mass in lower right half of abdomen. Same has gradually grown larger. But during past four months she noticed

* Read before Orleans Parish Medical Society, July 24, 1911.

it has enlarged very rapidly. Has not troubled her in any special manner, she suffering no pains whatever. Menstruation has always been regular, lasting four or five days at four week intervals. No metrorrhagia; no dysmenorrhea. Has always been well.

Seven months ago was married for first time. Menstruated January, February and March. Did not menstruate during past four months, April, May, June and July. Remembers being slightly nauseated for a few days some time after menses first ceased. But has noticed that the swelling in abdomen has grown very much larger in past several months. Has felt a heaviness in abdomen, but otherwise no pressure symptoms whatever.

EXAMINATION.—Inspection of abdomen showed an enlargement of same, about the size of an eight-months' pregnancy.

PALPATION.—Single, rounded mass, very hard and smooth, lying in umbilical region, and slightly to right of median line. Whole mass easily movable from side to side.

BREASTS.—Flabby. Just slightest secretion expressed from right nipple, none from left. Areolæ very dark brown, but papillæ not visibly enlarged. Breast signs negative.

VAGINAL EXAMINATION.—Inspection revealed marked purplish mucous membrane; Jacquemin's sign. Same was glistening in appearance. Upon introduction of fingers rounded fluctuating mass, filling whole lower pelvis was easily felt. Cervix not palpable with any certainty in front or behind. However, believed it to be high up and against os pubis in front. Probable diagnosis of pregnancy with fibroid or large ovarian cyst was made.

OPERATION.—July 15, 1911, under ether anesthesia and with median incision abdomen was opened. An enlarged uterus, markedly congested and resembling an egg-plant in form was revealed to view. Palpation brought out upper $\frac{2}{3}$ of uterus hard and rounded, lower $\frac{1}{3}$ soft and irregular, bulging into Douglas' cul-de-sac. No adhesions present. Uterus and appendages freely movable. Fallopian tubes congested and enlarged. Both ovaries much enlarged and markedly cystic. Uterine cervix was bent upon itself and jammed high up against pubic bone in front. It was impossible to determine contents of uterus in situ. Uterus was delivered and then removed by supra-vaginal amputation, without any trouble. Both tubes and one ovary were also removed. But in order not to produce premature menopause in patient, the

healthier ovary, etc., was only resected. Abdomen was closed with catgut in tier sutures, peritoneum, muscles, fascia and the skin being sutured separately. Three reinforcing silkworm sutures were also used in case of too early absorption of catgut material.

EXAMINATION OF SPECIMEN.—Revealed a single large sub-mucous fibroid occupying upper $2/3$ of cavity of uterus. Lower $1/3$ consisted of large cystic chamber, posterior wall of which was only about $1/2$ -inch thick and containing a fetus of about four months. Sac was perfectly intact and filled with clear fluid. Placenta was attached to lower side of fibroid. Mass weighed about 10 pounds.

Dr. Howard Kelly mentions several cases. He is in favor of producing abortion when the diagnosis is certain, except, of course, in cases like this one, where the natural outlet was blocked.

Dr. Dudley and Dr. Penrose both report one case each resembling the case under discussion very much and where operative measures were required. Furthermore, they set forth that abortion after the formation of the placenta, in these cases, is dangerous, as the placenta is difficult to deliver, and that, on account of the diminished power of uterine contraction, hemorrhage is apt to occur, or septicemia follow as result of non-expulsion of some of the membranes.

Pinard in Baudelocq's clinic observed in 14,000 pregnancies only 84 cases of myoma. In 66 cases pregnancy was undisturbed, in 13 cases there was premature labor, in 5 cases there was abortion, and in only four cases was surgical interference necessary.

Now, the question arises: Was surgical interference in this particular case necessary or not? If so, why? Well, it was a physical as well as a mechanical impossibility for this uterus to empty itself.

The fetus was practically incarcerated in Douglas' cul-de-sac; the cervix was jammed against the pubis, the heavy fibroma was above and in front of it, thus weighing it down: besides, the wall of the sac was thin. This wall, as pregnancy advanced, would have gotten thinner and thinner, and, being the place of least resistance, it would have ruptured eventually and the foetus would have been expelled into the abdominal cavity; expulsion through "via naturalis" being out of the question.

Enucleation of myoma was impossible on account of its size.

Vaginal Cæsarian section, on account of cervix, would have been impracticable.

P. S.—As a result of the operation patient was not shocked, nor even nauseated, and, I am gratified to state, is making an uneventful recovery.

Report of an Interesting Case of Prolapse of Funis, With Treatment.*

By A. C. KING, M. D., New Orleans.

I report this case because it is unusual in prolapse of the cord to encounter the entire cord in the pelvic cavity. With only a loop prolapsed, a living child and the knowledge of a 50% fetal mortality staring us in the face, no one enjoys meeting with this complication, yet the text-books tell us to just slip a noose around the cord and gently place it just where it ought to be. So easy, but in actual practice a much more difficult performance than one would imagine. Keeping the cord in place is harder than simply replacing it. A high mortality is not at all surprising when we consider that only moderate pressure or manipulation often results in death of the fetus.

The causes of prolapse are many and will not be recited here; suffice it to say, that in this case I believe it was due to two causes—viz., hydramnios and an unusually long cord, this cord measuring 34½ inches.

Mrs. P. J. C., age 38, mother of four healthy children; short and stout, weighing about 170 pounds. Labor began at midday and progressed fairly well all afternoon; pains not excessive at any time. I reached the bedside at 7 p. m., and after completing the usual preparations, introduced two fingers into the vagina, expecting to find a head presenting; instead, I found what appeared to be upon first impression, a bunch of snakes enveloped in a thin sac. I must confess that for a moment I felt a little puzzled, having never before discovered just this kind of a mass in the vagina. However, I soon recognized the condition as one of prolapse of the entire cord with unruptured membranes. The head was found at the brim, fortunately not engaged, the os in complete

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dilation, and pains not strong and coming at intervals of two or three minutes.

I explained the situation to the mother; explained also the great danger to her child and encouraged her to co-operate with me. I then had her adopt the knee-chest posture and made very gentle efforts at reposition of the mass between pains, taking care not to rupture the membranes, but soon found the attempt useless. Assistance was then summoned, the woman allowed to ease herself into an exaggerated latero-prone position, the hips elevated upon a pillow, the cord and child carefully watched. My hand I kept in the vagina with two fingers pressing the head back at each pain, fearing fatal pressure upon the cord, and kept this up until anesthesia was complete. The head did not engage, a very fortunate circumstance. She was then placed in the dorsal position, hips at edge of the bed; I passed my hand into the uterus, ruptured the membranes high up, and did a quick podalic version, delivering a 10½-pound girl. With an abundance of amniotic fluid, thorough dilation of the cervix and a capacious pelvis, the case was certainly a favorable one, but one cannot always tell these things before hand.

The point I wish to emphasize is the apparent value of holding the head away from the prolapsed cord, thus avoiding pressure. Had the pains been severe the head in this case would have been driven down into the pelvic cavity with almost certain death to the child. Again, had this been a primipara I doubt very much if the outcome would have been so favorable.

The Relative Immunity of the Negro to Alcoholism.*

By G. FARRAR PATTON, M. D., New Orleans.

Those who were acquainted with conditions prevalent in *ante-bellum* times will remember that the ability of the plantation negro to consume enormous quantities of whiskey with impunity was proverbial, and even at the present day it is found that among pure-blooded African descendants, such as the laborers congregated at railroad camps and in other similar gatherings of negroes, while whiskey is a fruitful source of disturbance, its ultimate effects on

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the individual are almost *nil*, except as a potential factor in favoring the development of renal and cardiac troubles.

So well known in former times was the tolerance of the negro to the special toxic effects of alcohol, as observed among the Caucasian race, that an expression was general in the South, comparing the guzzling of liquor by the average ducky, to "pouring it into a rat hole."

In view of these historic observations and of the supposed degeneration of the American negro under the weakening influence of civilization, it occurred to the writer that it might be of interest to ascertain what showing on the question is made by the statistics of the Charity Hospital of New Orleans since the beginning of the year 1906 when the present improved system of filing clinical histories was installed.

As is known to the majority of those present, that system provides for the preservation of a record in every case, however trivial, and in connection with the preparation of this paper a careful examination and analysis has been made of every history of alcoholism in a colored subject filed since the inauguration of the present system. As will presently appear, the labor involved was not really very great, since the number of such histories is surprisingly small.

However, before taking up the main question it may be well to define just what is meant in this paper by "immunity," and in this connection indulgence is asked for the introduction of the following apt quotation from McFarland's admirable text-book on the Pathogenic Bacteria, Chapter 4, page 85:

"Immunity is largely *relative*. Fowls are immune against tetanus—that is, they can endure, without injury, as much toxin as tetanus bacilli can produce in their bodies, and suffer no ill effects from inoculation. If, however, a large quantity of tetano toxin produced in a test tube be introduced into their bodies, they succumb to it.

"The mongoose and hedge-hog are immune against the venoms of serpents, so as to be resistant to as much poison as is ordinarily injected by the serpents, but by collecting the venom from several serpents and injecting considerable quantities of it, both animals can be killed.

"Rats cannot be killed by injection with *Bacillus Diphtheriæ*, and Corbett found that they could endure from 1,500 to 1,800 times as much diphtheria toxin as guinea-pigs, though more than this would kill them.

"Carl Fraenkel has expressed the whole matter very tritely when he says: 'A white rat is immune against anthrax in doses sufficiently large to kill a rabbit, but not necessarily against a dose sufficiently large to kill an elephant.'"

It is not claimed that the full-blooded negro is *absolutely*

immune against the toxic effects of alcohol, but from long and widespread observation of the negro during his condition of slavery, and especially since his acquisition of freedom, when he can and does indulge at will and to any extent in the use of alcohol, we seem warranted in concluding that no quantity which he is able to assimilate has the power to produce on his brain and nervous system the profound disturbance commonly observed in the white race under like conditions.

The negro continually gets drunk, when he becomes stupid, hilarious or quarrelsome, as the case may be, but his mental faculties, nervous system and digestive apparatus emerge unimpaired from the most protracted spree, whereas the average white man after such an experience emerges a more or less complete wreck, often after passing through a period of frightful delirium, traces of which may persist for quite a while after the patient is able to get about.

These general statements as to the relative immunity of the negro to alcohol are remarkably well borne out by the histories accumulated in the record-room of the Charity Hospital, an institution which would certainly get its share of alcoholic patients of African descent if there were many such patients ill enough to call for free medical treatment.

In the clinical records of the hospital, under the broad classification of "Poisonings and Intoxications," alcoholism is subdivided into five groups of cases, viz.:

1. Alcoholic cerebral edema.
2. Alcoholism acute.
3. Alcoholism chronic.
4. Alcoholic delirium.
5. Gastritis toxic alcoholic.

For the purposes of this paper the first subdivision may be disregarded because of its figuring so rarely as a diagnosis, and the last because the toxic gastritis of alcoholism may be regarded mainly as a local condition rather than a manifestation of toxemia. Thus narrowed down, the records of the past five calendar years show a total of 594 cases of alcoholism treated in the Charity Hospital, with 63 deaths, a mortality of 10.66%.

There were 577 white patients and seventeen of the colored race. *All the deaths occurred among the white patients.*

Considered in detail the 594 cases in question appear in the records as follows:

Alcoholism acute, 385 cases, 371 being white, with 10 deaths, and 14 being colored, with no deaths.

Alcoholism chronic, 110 cases, 108 being white, with 15 deaths, and 2 being colored, with no deaths.

Alcoholic delirium, 99 cases, 98 being white, with 38 deaths, and 1 being colored, with no deaths.

In view of the natural tendency of hospital internes to make acute alcoholism the "principal disease" in cases which are admitted suffering with any injury or condition resulting from alcoholic intoxication, a very careful analysis of the histories of the fourteen colored cases filed as acute alcoholism has been made by the writer in order to determine how many actually came to the hospital on account of that condition pure and simple. The result shows that the majority were admitted on account of other troubles. For example, without going through the entire list, the following may be cited as instances:

One man had been badly beaten and was brought in by the police.

Another had fallen off a moving street-car and sustained multiple contusions.

One had caught a severe cold and had developed bronchitis.

Another man, fifty years old, though on a spree, was generally ill, having chronic renal and cardiac troubles.

Another had been at work on a shed while under the influence of liquor and had fallen off. He was brought to the hospital mainly to find out whether he had been seriously injured.

One young negress, 20 years old, is described in the history as being evidently a malingerer.

Another woman, 39 years old, was on a spree, and suffering also with obvious lesions of syphilis, had been brought into the hospital for all-around treatment.

Among the fourteen histories of colored patients filed under alcoholism acute, there are three women who would appear to have come to the hospital primarily on account of that condition, and it is interesting to note that two, respectively 20 and 24 years of age, were of mixed white blood. Another female patient, in whose case no exception could be taken to the primary diagnosis of acute alcoholism, was 41 years old. In this case, in the absence of any

specific mention in the history, it cannot be asserted that an admixture of white blood was present to weaken the native African power of resistance, but in community where the proportion of mixed blood is so large that probability must be taken into account.

Among the 110 cases filed as alcoholism chronic, there appears only two of colored patients. One was a man 59 years old, who was brought in by the city wagon from one of the police stations, and who promptly deserted early the next day before the interne had an opportunity to ascertain his history in detail. The diagnosis in this case reads "*probably* chronic alcoholism," while the preliminary physical examination revealed the existence of general arterial sclerosis with chronic valvular lesions. For statistical purposes it may be held that such a case is not really entitled to be considered, and we pass on to the other recorded case, in which Dr. A. A. Keller, then an interne, wrote a careful history. This case, in the opinion of the writer, is of particular interest as illustrating the phenomenal power of resistance to alcoholism possessed by the full-blooded negro.

The patient, a well-developed black negro, 22 years old, began drinking heavily on Christmas Eve, 1908, and kept it up practically without intermission until New Year's Day, by which time he had begun to experience pains in his limbs and back, so that on the whole it was decided, doubtless by his friends, that he had better be sent to the hospital. The history describes him as being in a semi-comatose condition when admitted, which may be interpreted to mean that he was in a drunken stupor, as he was capable of muttering speech when spoken to. Notwithstanding the length of time he had been on that spree, his general condition was good, except that his respiration was quickened to 28 per minute. His temperature was normal and his pulse 78.

After a few hours, during which time the automatic eliminative power of his system, like that of some healthy domestic animal, was actively at work throwing off the poison, he roused up and gave a perfectly rational account of himself.

He stated that he was an habitual drinker, averaging about ten drinks a day, with perhaps one big spree once a month. He did not say how much more than the daily ten drinks it took to put him on a spree, but one may imagine the quantity. He said that he had kept this up for several years, smoking cigarettes and

chewing tobacco. His admission of being a steady drinker doubtless decided the interne to call his case one of chronic alcoholism, though he was then recovering from what might be considered an acute attack.

Aside from ordinary purgation by moderate doses of Epsom salt, according to the custom of the hospital, he was given no special treatment and made a rapid recovery. At no time while he was under observation did he show any disturbance of his mental faculties other than the drunken stupor in which he was admitted, and the carefully written history of his case makes no mention of any derangement of nerve power, while the nurses' notes testify to his unimpaired appetite, as well as to the activity of his bowels and kidneys.

Altogether, here was a case in which, if the patient had been a white man admitted to the hospital after a debauch of more than a week in mid-winter, he would probably have developed delirium tremens, with a possibly fatal pneumonia, but being a young negro in the enjoyment of the relative immunity of his race to alcoholism, he recovered without the slightest hitch and walked out of the ward none the worse for his spree, as far as could be observed.

Taking up the subdivision of Alcoholic Delirium, it may be said that this condition especially marks the difference between the relative power of resistance to alcoholism possessed by the white and negro races. It is no disparagement to the higher type of intellectuality which we occasionally find among the domesticated African race to say that in the mass the negro possesses a brain which, as compared with the delicate and refined mechanism by which the brain of the Caucasian race accomplishes its intellectual work, is like some crude piece of machinery fitted only for a limited scope of achievement, but very massively built and not easily put out of adjustment.

It is like the ponderous ore-crusher as compared with such a piece of mechanism as that which in a watch factory automatically fashions from the crude wire, by successive processes adjusted to the ten-thousandth of an inch, those tiny screws with almost invisible threads which dot the rim of the balance-wheel, or like the primitive lever printing machine of Franklin's day, as compared with the perfecting rotary presses of our time. These comparisons may sound fanciful, but are just.

While the potent poison of alcohol, passing through the relatively coarse brain cells of the Ethiopian may momentarily impede their functional activity, no lasting effect seems to be produced; but on the more highly organized intellectual mechanism of the Caucasian brain, even when undeveloped by proper exercise, the power of that poison for disturbing functional adjustment is tremendous and far-reaching, affecting not only the psychic action of the cells, but playing havoc with the cöordination of nerve force, even to the extent of deranging functions purely automatic, such as digestion and elimination. We are all familiar with those effects.

Here again the hospital records afford eloquent testimony. Of the 99 cases filed under the heading of Alcoholic Delirium, only one was a colored man, a mulatto 45 years old, with the aristocratic name of W—— van B——. This patient had been addicted for years to the use of alcohol. His history, unfortunately, is not particularly explicit, but seems to indicate that he had a mild, but fairly well-marked case of alcoholic delirium, such as might be expected in the instance of a middle-aged man of mixed white and negro blood emerging from a protracted spree. It was evidently his white blood that made him liable, though he presented the familiar condition of pronounced arterial sclerosis so common in middle-aged men addicted to the habitual use of alcohol—a circumstance to be taken into account in connection with disturbed brain function.

On the whole, this single instance of alcoholic delirium, with recovery—the patient being a mulatto—in a total of 99 cases extending over a period of five years, with a white mortality of more than 37 per cent, may be taken as corroborative of the general contention that the negro race, even when handicapped by an admixture of white blood, enjoys marked immunity against the toxic action of alcohol commonly exerted upon the brain and nervous system of the Caucasian.

By way of anticipating some plausible arguments which may be advanced in opposition to this contention, let us consider a seemingly strong point actually raised by a friend of the writer to the effect that the comparatively small number of negro patients admitted to the Charity Hospital does not necessarily indicate that there are not as many negroes as white people suffering with the various forms of alcoholism, but merely the fact that, while white

patients readily seek hospital treatment and are freely admitted, the average negro rather dreads going to the hospital, and, to put it mildly, would be "discouraged" from applying for admission on account of a casual fit of intoxication. Also that the police, who are often glad of an excuse to send a troublesome white prisoner to the hospital for medical treatment, are much less likely to think of bothering the hospital staff by sending them drunken negroes to care for, unless the patient should happen to have been wounded or otherwise visibly injured.

Now, while it may have been true in years gone by that many negroes dreaded going to the Charity Hospital, it will certainly be admitted by all familiar with the work of that institution in present times the colored population of New Orleans and the tributary country seem to have got bravely over any such reluctance to be given free board, lodging, professional treatment and gentle nursing at the expense of the State. So far from avoiding the hospital, the colored people have evidently "caught on" to the great advantages which it offers, and fairly swarm there for admission. Therefore, it seems fair to assume that if there were many bad cases of alcoholism among the negro population—*i. e.*, such cases as are constantly occurring among the lower element of the white people—the families and friends of those patients would not hesitate to hurry them to the hospital.

The truth is, that while there are plenty of drunken negroes in and about New Orleans, they are recognized by their friends as not being sufficiently ill to require any active treatment, it being only necessary to let them sleep off the passing effects of liquor, after which they are perfectly fit, without a vestige of headache, nausea or nerve tremor, and are able to resume work at once. This is what the writer considers practical immunity against alcoholism, and he challenges contradiction in so calling it.

As regards the rôle played by the police in keeping the majority of inebriate colored prisoners in jail to recover rather than send them to the hospital, except in cases requiring surgical attention, it must be admitted that in the main this plan is based on sound judgment, especially in view of the fact that there are competent medical officers attached to the police force, thus relieving the line officers of what might otherwise prove a grave responsibility.

Among other arguments that may be advanced in opposition to the conclusions arrived at by a study of the hospital records, it might be claimed that the same eliminative process by which the writer disposes of the majority of the cases of acute alcoholism among the colored patients could be logically applied to the histories of the white patients, with the result that in the end it might be made to appear that comparatively few genuine cases of alcoholism are actually treated at the Charity Hospital.

On this point it is freely admitted that many white patients whose histories are filed under the heading of alcoholism, acute and chronic, were admitted mainly for the treatment of incidental conditions, but in view of the large number of those white patients, nearly six hundred in five years, we might afford to apply the eliminative process exhaustively and still have a sufficiently large showing to substantiate the contention made in this paper.

One fact which speaks with convincing eloquence is the almost total absence of mortality from alcoholism among the colored population, not only in the Charity Hospital, but in the city at large. Surely, a race that takes the same chances of exposure to a cause of death that figures so appallingly among the white people, and which escapes absolutely unscathed, must be admitted to enjoy wonderful relative immunity.

Louisiana State Medical Society Proceedings.

EDITED BY PUBLICATION COMMITTEE,

DR. JOSEPH D. MARTIN, Chairman, 141 Elk Place, New Orleans, La.

DR. ARTHUR I. WEIL, New Orleans, read a paper entitled

Acute Otitis in Measles, Diphtheria and Scarlet Fever.

It is one of the commonplaces in medicine that the complications and sequellæ in the acute exanthemata of children are of gravest importance, frequently more so than the original disease itself. It is in watching for, guarding against and combatting these that the attending physician can render his most important service, the primary affection requiring in many cases at best only symptomatic treatment. Of all the complicating dangers that may beset these stricken children none are more common or more fraught with evil potentiality, both to the life of the patient and his future well being and usefulness, than those affecting the ear. This is conceded freely by some, grudgingly by others, as Forcheimer (*Twentieth Century Practice*, Vol. XIV, page 57), who says: "The danger of ear trouble, while greatly exaggerated by the specialist, are nevertheless real."

The frequency of ear complications while hardly a matter of debate, may nevertheless be shown by a few statistics. The annual report of the Metropolitan Asylum Board for 1906 (Yearsley, *Practitioner*, January, 1909, page 27) states that out of 4,937 cases of diphtheria, 247 (5.06%) had otitis, in which 5 (0.10%) had involvement of the mastoid. In 1900 the percentage of otitis among the diphtheria patients was 7.42%. Stangenberg found that out of 1,000 diphtheria patients 243 had ear complications of one sort or another, and of these 65% (6.5%) had exudative middle ear disease either serous or purulent. The Metropolitan Asylum Board for 1906 reported out of 17,829 cases of scarlet fever 2,355 cases of otitis (13.21%) 122 had mastoiditis. In the report of 1907 the percentage of ear complications was 11.4%. Burckhard-Meriam reports that out of 4,309 cases of otitis media, collected at random from various sources, authorities and countries, 445 (10.1/3%) originated from scarlet fever.

Duel (*Med. Review of Reviews*, March, 1901), in a somewhat elaborate review of the cases of otitis resulting from scarlet fever, diphtheria and measles at the Willard Parker and Riverside Hospitals in New York City, which need not be given in detail, reports that out of about 6,000 children suffering from these diseases, roughly speaking, about 1 in 20 (5%) of the measles cases, 1 in 10 (10%) of the diphtheria, and 1 in 5 (20%) of the scarlet fever cases had otitis media either in the acute catarrhal or the suppurative stages, principally the latter. Where two of the diseases existed concomitantly—that is, a mixed infection—the percentage was very much higher, running from 30 to 40%. The percentage of mastoiditis is also high. It is, moreover, to be noted of the otitis cases resulting from any of these diseases, about 50% were bilateral, a fact which, even if it does not materially endanger the life of the patient, certainly threatens the permanent disability caused by partial or complete deafness. A glance at the reports of any of our deaf mute institutions or the United States Census Report will show that a considerable proportion of deaf mutes owe their misfortune to an attack during childhood of one or more of these infections.

Since the otitis following any of these diseases is more or less alike in characteristics, it is my purpose to discuss all of them in common, touching chiefly on those points in etiology, prophylaxis, diagnosis and treatment which are of especial interest to the general practitioner, for to him usually falls the burden and responsibility of their care. Where a specialist can be consulted, it is always advisable, when ear complications develop, but in the country and in small cities this is not practicable. Doctors practicing in these localities must be able, in a measure, to cope with these troubles themselves. It is to them especially that this paper is addressed.

It is necessary to say just a word about each disease separately before entering upon the general discussion. In scarlet fever we must agree with Jarecky (*N. Y. Med. Record*, Vol. LXVII, 1905, pp. 292) that etiologically the complications arise from one of the following causes:

1. Toxins of the disease.
2. Extension from the throat.
3. General weakness and emaciation.

First causes, those cases (a) where there is general toxemia; (b) those in which the labyrinth is affected without involvement of the middle ear and cases of panotitis; (c) those occurring at the period of desquamation, when all active symptoms of the disease have subsided. It is at this period, likewise, that nephritis and similar complications are likely to occur. The virulence and destruction that follows some of these cases can be accounted for in no other way.

Second causes, those cases in which the disease extends through the eustachian tube. Here we are dealing with an inflammation and infection by direct continuity. Adenoids and other obstructive conditions in the nose and throat favor these infections and will be entered into a little more fully in the general discussion of etiology and phophylaxis.

Third, general weakness, as in all debilitating diseases predisposes to otitis. Whenever the general bodily resistance is lowered an otitis may supervene as well as another infection. It has, likewise, been suggested that in the wasting process of the disease the fat around the eustachian opening is absorbed, so widening the entrance to the canal and facilitating the entrance of infectious matter.

In scarlet fever the otitis is much more apt to occur late in the disease, during the period of desquamation, consequently it is during convalescence that we must be especially on our guard for the signs of beginning otitis. The otitis of scarlet fever is, as a rule, more severe than that accompanying the other two diseases, though the same rule holds good here as in the others, that the virulence of the otitis is proportional to the virulence of the causative disease, thus a mild scarlatina causes, as a rule, a mild otitis, while a severe measles may give rise to a very virulent otitis.

The ear complications of diphtheria fall naturally under four heads:

1. Diphtheritic inflammation of the external auditory canal.
2. Affections of the internal ear, usually a nerve deafness somewhat analogous to post-diphtheritic paralysis of the soft palate and other neurosis produced by the general toxemia of the disease. These two conditions, besides being of minor importance, are outside the scope of the present paper and will not be further considered.

3. Diphtheritic inflammation of the eustachian tube and middle ear.—This condition is characterized by the presence of the same diphtheritic membrane seen in all diphtheritic inflammations. In the external ear the treatment consists, after removal of the membrane, in painstaking cleansing and disinfection of the canal and irrigation subsequently with weak lime water or other alkaline solution. Involvement of the external ear alone is rare and easily dealt with. Where the middle ear participates in the process, or is alone involved, the treatment is not greatly different from that of any other exanthematous otitis and will be taken up under that head.

4. Acute catarrhal or purulent inflammation of the middle ear without the formation of membrane.—In no sense different from the otitis caused by scarlet fever or measles.

The otitis caused by measles is usually of a less virulent character than that caused by the other exanthemata. This is, however, not an invariable rule, for, as stated above, a severe measles may give rise to a very virulent otitis. The time of onset is usually at the height of the attack, when fever and other symptoms are most active, in contradistinction to scarlet fever, wherein the otitis often develops during the course of convalescence.

ETIOLOGY.—Infection of the ear, although it may in rare instances be carried by the blood stream, is usually a result of direct extension through the eustachian tube. In all of the diseases under consideration, the throat, nose and naso-pharynx are the primary seats of infection, the point of entrance of the disease-bearing germs into the organism. It is no more than natural, then, in view of the close relationship existing between the ear and the nose and throat, that the disease should be carried from the one to the other. An added factor, of course, is the general debility and diminished resistance which always accompanies acute disease and promotes infections of any sort. The absorption of fat around the entrance to the eustachian canal, as mentioned above, may play its part, though in all likelihood a very small one.

PROPHYLAXIS.—A child whose nose and naso-pharynx is in a healthy state is much less susceptible to ear complications than is one where abnormalities exist. Therefore, one of the chief elements in prophylaxis is a healthy nose and throat. All children should have adenoids and tonsils removed when they are large enough to

cause obstructions or if they show signs of disease. Other nasal obstruction and diseases should likewise be remedied. The New York Health Department reports show that out of hundreds of thousands of school children examined in the routine of school inspection, from 10 to 15 per cent. have adenoids, tonsils, or both. It is generally conceded by the men who have had most experience with the exanthemata in children, that when the tonsils and adenoids have been removed, ear complications are much less frequent. If, however, this has not been attended to before the onset of the disease, we must make the most of a disagreeable condition and do our best to prevent complications.

As Fowler (*Am. Jour. of Obstetrics*, Vol. LVIII, pp. 530) justly remarks, all treatment which tends to mitigate the primary disease will tend also in some measure to prevent complications. Attend, therefore, to dust and smoke-laden atmosphere, beware of sudden changes of temperature and exposure to draughts, cold or dampness. Keep the room at a temperature of 60° to 65° F., well ventilated, but not draughty. Keep the air moist to prevent drying and cracking of the mucous membranes. Pay attention to the bowels, regulate the temperature by means of cold packs, tepid sponges and the like. Careful regulation of the diet, with the use of bland and non-irritating foods should also be observed. Keep the patient in bed until desquamation is over, since a child in bed is much less prone to complications than one running about the house. Encourage the child to blow the nose frequently, always keeping one nostril open to avoid forcing infectious material through the eustachian tube into the ear. Where the child is too young to blow the nose, the same purpose can be accomplished by gentle inflation of one nostril by means of the Politzer bag, being careful again that the other nostril is kept open. Bland oils, as olive oil, liquid vaselin, with or without a little boracic acid or liquid albolin, either dropped into the nose with a medicine dropper or sprayed with an atomizer, assist in keeping the nasal mucous membrane in good condition. Where there is much congestion or clogging of the nose, the condition may be alleviated by the use of pledgets of cotton soaked in weak cocain and adrenalin, about 1/2% cocain with one to five or ten thousand adrenalin. For this purpose, also, weak cocain and antipyrin make a useful

mixture, with more prolonged effects and rather less reaction than the first named. Avoid powders and irritating substances.

Swabbing or some form of douching are the best methods for cleansing and disinfecting the throat and naso-pharynx. Fowler suggests that the simplest and most agreeable method of accomplishing this result is by giving frequent drinks of cool clear water or demulcent drinks of marshmallow water, slippery elm, lemonade or similar refreshing beverages. The frequent act of swallowing induces beneficial results in several ways. First the fluid tends to cleanse and moisten the mucous membrane of the throat, just as would a swab; second, with each act of swallowing, the tonsil is firmly grasped between the palato glossus muscle of the anterior pharyngeal pillar and the palato pharyngeal muscle of the posterior pillar and the tonsillar crypts are milked and emptied of their infectious contents. Third, with each act of swallowing the eustachian tube is opened, giving an uninfected ear better ventilation and a catarrhal ear an opportunity to discharge some of its serous contents. This is not so important a factor in infants as their eustachian tube is naturally wide and patent, which accounts in all likelihood for the lack of severe pains in infantile otitis.

DIAGNOSIS.—The symptoms, one or more of which indicate an infection added to the pre-existing disease, are increase in temperature or a sudden rise of temperature after the fever has entirely subsided, pain or feeling of uneasiness in ear, a sudden deafness or an aural discharge. These are the cardinal symptoms and they occur either singly or two or more together. The most constant symptom is a rise in temperature. This is particularly striking in those cases, especially of scarlet fever, where the rise takes place suddenly after all active symptoms have subsided and the patient has been running a normal temperature for a few days. But even in the active stage a temperature rise of two or three degrees above its usual run is always suggestive.

Pain or feeling of uneasiness, or discomfort in the ear, a sensation of fullness and stoppage, is decidedly suspicious, also deafness; but it must be remembered that we are dealing in these cases usually with children or infants who are not able to describe their symptoms, and in whom the added fretfulness might be assumed, if one is not constantly on the watch, for ear developments to be a regular manifestation of the general disease. Deaf-

ness, moreover, is not very noticeable in children, especially those in a more or less somnolent condition from the general toxemia of the disease, and in infants is difficult to elicit even when carefully sought. The fever then is usually the most striking symptom, and when this passes unnoticed the first sign of aural involvement is not infrequently the appearance of discharge in the canal. It would seem the part of wisdom, then, to insist that the temperature be taken regularly, even in those cases where the active symptoms have subsided and convalescence is well advanced. A wise rule would be to have a morning and evening temperature for the first ten days of convalescence in measles and diphtheria, and for at least the first four weeks after the entire subsidence of symptoms in scarlatina. In addition to a careful watch of the temperature, there should be frequent inspections of the drum. It is the duty of a physician to investigate the condition of the drum at each visit. It should, indeed, be as regular a part of the visit routine as taking the temperature and pulse. A competent inspection of the ear drum necessitates no great skill or technique, and is within the reach of any intelligent practitioner. It requires only an ordinary forehead reflector and an ear speculum, instruments in the possession of practically every physician. In adults the ear is drawn upward and backward to straighten the canal, and on insertion of the speculum the drum comes plainly into view. Owing to the difference in shape of the canal the procedure is somewhat different in children and infants. With children the ear should be drawn straight backward and with infants downward and backward to straighten the canal, and with infants the speculum should be tilted somewhat upward. Owing to the superficial location of the drum in infants, and the absence of hairs in the canal, it is occasionally easier to observe the drum without the use of a speculum. In infants it is sometimes a little difficult to get a satisfactory view of the drum and the procedure requires some little skill and practice.

BACTERIOLOGY.—Observers all agree that the bacterial picture found in otitis from the exanthemata, as in most forms of otitis, is a complicated one. The Klebs-Loeffler bacillus may be found in those resulting from diphtheria, and usually is present where a membrane exists. Otherwise, the most common organisms are the staphylococcus pyogenes and streptococcus, but the pneumococcus,

the meningococcus, the influenza bacillus, and many others, are not uncommon. Usually there is a mixed infection with the staphylococcus or streptococcus predominating. The variety of organisms present are of little significance except for the streptococcus, which almost invariably means a very virulent infection and a great probability of mastoid involvement, with rapid destruction of bone. Duell especially advises a bacteriological examination in each case, and when streptococcus is found recommends a prompt mastoid operation at the first signs of mastoiditis.

TREATMENT.—Frequent inspection of the drum would doubtless reveal many cases of catarrhal otitis whose presence would otherwise never have been suspected and which go on to spontaneous cure. These naturally need no treatment. But when the catarrhal condition shows a tendency to become aggravated sometimes abortive treatment may promote resolution and prevent suppuration. This treatment consists in the prompt administration of calomel in divided doses, followed by a purge, application of ice behind the ear over the mastoid region, and frequent and prolonged irrigation of the canal with warm boracic or saline solution. This latter, if it serves no other purpose, cleanses and disinfects the canal and tends to prevent a catarrhal otitis from becoming purulent by infection from without in the event of a spontaneous rupture of the drum. A most valuable agent in my hands, not only in this, but in all forms of threatened otitis, has been the use of a 10 per cent. solution of carbolic acid in glycerin. This is dropped in the ear, 15 or 20 drops, warm, every two or three hours until the pain and redness subsides. By its great penetrative power it wonderfully reduces pain and frequently aborts suppuration. A serous exudate behind the drum is not a serious matter, and as long as it remains serous, as evidenced by its translucence and fluidity (it may sometimes be seen as a clear fluid, changing its level with each motion of the head) and lack of inflammatory signs, we may safely proceed with our abortive treatment.

When these measures fail, when the pain and temperature continue and increase, and bulging begins to be apparent, especially in the posterior superior quadrant of the drum, its usual locations, it is advisable to make a prompt paracentesis. Adequate drainage is the sine qua non of effective treatment. It is the one means of preventing extension to the mastoid, with more or less extensive

bone destruction. Though nature practically always provides this drainage, if we wait for it long enough, by means of a spontaneous rupture of the drum, nevertheless an early myringotomy, properly performed, has a two-fold advantage. First, by previous sterilization of the canal by means of hot bichloride or other antiseptic solutions before the opening is made in the drum, we diminish the likelihood of infection of tympanic cavity from without, thus preventing a possible suppuration in what might otherwise remain a serous inflammation. Second, a free incision in the most desirable location will drain better and will result in a quicker cure with less impairment of hearing. Spontaneous perforations are often not sufficiently large to effect adequate drainage. A myringotomy, though one of the simplest of operations, requires to be properly done if it is to attain the best results. Since two of the papers on the program of this meeting are devoted to the subject of tympanotomy, I shall not enter further into details than to say I always make the incision from below upward, a somewhat more cumbersome method than a cut in the opposite direction, due to the oblique inclination of the drum to the canal, as will doubtless be explained in the other papers, but advisable, nevertheless, inasmuch as it makes impossible an injury to the jugular bulb situated just below the tympanic cavity, an accident which has resulted in severe and sometimes fatal hemorrhage in a few cases. Incise freely through the whole extent of the bulging portion and repeat the incision as often as may become necessary through a premature healing of the drum.

After drainage is established, both the dry and wet method of treatment have their advocates. Either is satisfactory if properly carried out, but the dry method, which consists of insertion of a small gauze drain up to the drum with a gauze dressing to the outside of the ear to promote capillary absorption of the pus, requires more constant attention and changing and is impractical without the services of a trained nurse. The wet method consists of syringing or irrigating the canal as often as pus collects in it with a warm boracic acid or other mildly antiseptic solution; otherwise, treat symptomatically. An ice bladder behind the ear may reduce the likelihood of mastoid implication and diminish the pain.

MASTOIDITIS.—As is to be noted from the statistics, mastoid involvement is not uncommon, in spite of the most painstaking treat-

ment. In children under five mastoiditis is almost invariably characterized by post auricular swelling, due to the escape of pus through the Rivinian segment. (Duel, *vide supra.*) In children up to ten it is not uncommon, due to perforation of the thin cortex. In older children and adults it is more rare, except when much destruction has taken place. In these we must rely for our diagnosis on other symptoms; for example, an abrupt increase in temperature, mastoid tenderness, an increase in the discharge. A rise in temperature does not always take place, and it is well not to wait too long for its appearance. When streptococci are found in the pus in appreciable quantities a prompt operation is always indicated. The most rapid destruction of bone with necrosis of the internal ear and complete loss of hearing may be the penalty for a more dilatory procedure, to say nothing of the possibility of extension to meninges, brain abscess, sinus thrombosis and possible loss of life. Where the staphylococcus or other organisms cause the suppuration, we may be somewhat more deliberative, but even here too long delay is apt to be accompanied by fatal consequences. Extensive bone destruction with caries of the internal ear, following delay, is so common as to be seldom reported; nevertheless, numerous cases are to be found in the literature, of which Koller (*N. Y. Med. Record*, Vol. LXV, pp. 173) reports a typical one. The whole tympanic cavity, attic and antrum, were full of pus and granulations in which the ossicles were involved. A sequestrum composed of the superior and external ampullæ and the adjoining parts of the canal were removed, the facial nerve being denuded.

PROGNOSIS.—Generally speaking, the more severe the original disease, the more virulent the ear infection. It is for this reason that scarlet fever otitis is, as a rule, the most fulminating and causes more danger to life and hearing. Next in order is diphtheria, and last measles. The chief danger to life is caused by extension to meninges, and brain and sinus thrombosis, with subsequent septicæmia and pyæmia. The hearing is threatened principally through the involvement and necrosis of the internal ear, complete absorption of drum membrane with the ossicles and caries of the surrounding bone. In other words, the otitis becomes chronic with constant suppuration and menace to the remaining hearing throughout the life of the patient, or until a radical operation is performed. The gravest element in the prognosis is the fact that this chronicity

often supervenes in spite of the most skilfull and painstaking treatment.

DR. R. F. HARRELL, Alexandria, La., read a paper entitled :

Report of a Case of Chronic Suppuration of the Frontal Sinus Cured by Gradual Dilatation with Conical Sounds and Irrigation.

Mr. D. F. L., aged 38, came to me in the spring of 1908 with the usual symtoms of chronic frontal sinusitis—viz., headache, soreness over the region of the frontal sinus, pain on pressure under the arch of the orbit to the nasal side, dark area as shown by transillumination, with free discharge of pus and lowering of the general health.

I removed the anterior end of the middle turbinate with the cold snare, passed a very small canula through the infundibulum into the frontal sinus, through which I irrigated the sinus with various antiseptic fluids about every other day until my patient was comparatively free from headache; then these treatments were kept up about twice a week. In the early summer, when I was ready to go on my vacation, I left my armamentarium and patient with one of my friends in general practice, who kept up the treatments during my absence. On my return in the fall I found my patient in about the same condition as when I had left him, although the sinus had been very efficiently cleansed at regular intervals during the summer.

During my summer trip I had the opportunity of watching some cases treated in the London Central Nose and Throat Hospital by Dr. Dundas Grant by gradual dilatation with conical sounds. It struck me as being a very rational mode of treatment, and especially where the patient refuses to submit to operative treatment, as did my patient. On my return, I immediately had made some double sigmoid sounds, beginning with No. 1 and extending up to No. 18. At first the number No. 1 was used with some difficulty. But soon the infundibulum was sufficiently dilated to admit a larger one, and then a larger, until, within about two months, I was able to pass the No. 18 with perfect ease. After reaching a No. 18 I found that I could cleanse the sinus very efficiently with the spray, which was

used before and after the sound, twice a week, for about one year. At the end of this time my patient had recovered entirely from all symptoms, and has been perfectly free from any symptoms of a return of the disease for more than a year. The No. 18 sound is still passed with each about once a month.

Some of the points which I consider worthy of our attention in this method of treatment are:

First. The possibility of the dilatation of the infundibulum to an enormous size, giving thorough aeration and drainage of the diseased sinus.

Second. The advantage of this method of treatment over some of the internal rasping and sawing operations, as being more conservative and less dangerous. Especially in cases refusing to submit to the external operations we may often relieve our patient by perseverance in the dilatation of the naso-frontal duct with sprays and irrigations.

Third. This case goes to show that it is not impossible to restore the lining membrane of the frontal sinus to its normal functions without a curettage, even though that membrane has been a pyogenic membrane for more than a year. It proves the fact that we often fail of success because of lack of faithful perseverance in our treatment, a fact which should be impressed upon our patients and their thorough co-operation secured and maintained, if possible.

DISCUSSION OF DR. HARRELL'S PAPER.

DR. ARTHUR I. WEIL, New Orleans: I think this report of an interesting case is worthy of discussion, because it calls attention to the value sometimes of conservative treatment. When we have a chronic suppurative sinusitis, accompanied by filling up of the sinus, with marked hypertrophy of the membrane, polyps and granulation tissue, of course there is very little likelihood of the disease disappearing under the most persistent washing out treatment. I have seen a number of cases, however, that were operated on where the lining membrane was not markedly diseased, and where persistent treatment of this sort would have effected a cure; and we should all remember that conservatism is only to be practiced until a more radical procedure is called for or resorted to.

Annual Oration

BY HON. JARED Y. SANDERS, GOVERNOR OF LOUISIANA.

Mr. President, Ladies and Gentlemen, Members of the Louisiana State Medical Society: It is really a pleasure for me to be with you to-night. Shreveport, under all circumstances, is a delightful city to be in. It is particularly delightful to be here right now, as there is something doing every minute of the day and night. Even as humble a citizen as myself may often be plied with questions pertaining to this city in the Parish of Caddo three or four or five times a day, and, as you may surmise, I have been quite busy sidestepping questions. I believe there are three meetings to be held in this city to-night, one in the Opera House, one in the open air, and one in the City Hall, and there would be more except that is the limit of the capacity of the town.

I asked your President what he wanted me to talk about to-night, and I have asked several physicians who are my friends the same question, and not a single one would indicate any preference at all, except as to the scope and length of time I should speak, and they all advised me to cut it short. They said that this hall was very hot; they had spent nearly all day in it, and expected to spend to-morrow and the next day here.

You all know that those of us who are not physicians view doctors with mingled feelings of scorn and dread. We scorn their ministrations when we are well, and we dread their bills when we are sick. Every one of us, who feels as I do to-night, has a perfect contempt for your profession, and yet when we are taken down with a pain, whether that pain be in the foot or head, or in the intermediary stations, we at once want a doctor, and maybe two of them. Why we want more than one I have never been able to figure out, but we do. We have a very good chance with one, and very little with the other in consultation. But there is one thing about the doctors' profession that appeals to me particularly. I have not got a drop of standpat blood in me; I am never satisfied with existing conditions; I always feel and believe that by an honest effort we can do just as good or a little better, and if there is anything in the world that is characteristic of your profession it is that you have never been satisfied with what you knew, but you have been reaching out for thousands of years to get more diseases for us

laymen to have; and, not content with the manufacture of the disease and with the proper branding and labeling of it, once you have discovered it, then the minds of all of your profession are set to work with an intensity that is absolutely appalling to find some remedy and some cure for that disease. The physicians, as a class, are the most remarkable body of mankind in the world. You are the only profession on earth that is continually working to put yourselves out of business. Did you ever stop to think of that part of your life work? If each one of you doctors of Louisiana could reach your ideal to-night, there would not be a patient in this State to-morrow, and there would not be a living for a single physician in the State of Louisiana. Is not that true? Every single one of you is working and striving to find a cure for every known disease. Now, you ought to stop a little while and think before you go too far in that direction. What are you going to do if you discover it? And then what is the great mass of us going to do when disease is banished from our midst. I know lots of people who are never happy unless they are sick, and I know plenty of people who are absolutely convinced they have got every disease known to your profession, and do not believe their own physician when he tells them no, they have not, and charges them for it. You ought to be careful as to how you banish from our midst the satisfaction of being sick and take away from us the solace of feeling that we are a little better than our neighbors because we have a rare disease. That is something most of us pride ourselves on. Lots of men, to say nothing of women, take a good deal of pride in the fact that they are sicker than their neighbors, or that they have a certain high-sounding ailment that is uncommon in the neighborhood. It is a mark of distinction. It sets us apart from the common herd, and you gentlemen have no right, in this day and time, when we have so little pleasure, to take away from us even this thought.

Years ago, when I first went to the Legislature, some of your physicians came to me and enlisted my interest in the passage of a doctors' bill. They told me they wanted such and such a bill passed to protect the profession. I voted for it, and I stayed in the Legislature a great number of years and I supported every bill that the Louisiana State Medical Society or its representatives asked me to support. Why? If you all felt that you needed protection against those who were practicing medicine or attempting or threatening to

do so, I felt that I needed that protection too. If you were all not willing that these fellows should come in and practice on the great mass of humanity, as I was one of that kind, I was perfectly willing to be protected, and, as a matter of fact, is there anything higher in the State than the lives and health of the people? Is there anything that the State government ought to look after more carefully than the health and the lives of the citizen? And is there anybody in the world that ought to have protection thrown around them to-day more than the medical profession. I do not think so.

As to the lawyers, it does not make much difference whether he knows much law or not. If he does not know much law the other lawyer shows it up in the courtroom. It soon becomes a matter of common knowledge in the community. Let us take Brown. He has graduated as a lawyer and he is admitted to practice. All of his work is done in the open. It is done in the courtroom, and the opposing lawyer is trying to tear his argument to pieces, is trying to win his side of the case, and if Brown is a poor lawyer he does not do much damage, because he does not get many clients, and as a rule he is dealing only with property or with liberty. He is not dealing with life, as you all are, save in capital cases. That is not true of a doctor. I come into Shreveport as a stranger; I get sick and send for a physician. There is nobody there to correct his mistakes; there is nobody there to tell me whether he is doing what is right or not. I have got to take what he says and does on faith. It is not like a lawyer, who can appeal a case to a higher court, or ask for a new trial and get another attorney to handle his business. If a doctor makes a mistake he buries it. That is all. So it is essential, in my opinion, to see to it that no one gets into your profession save those who are well qualified.

Since I have been Governor I have appointed on the board those whom you have recommended without question, and I believe from what I have heard and from what I know, that the medical board of this State, the examining board, stands as high to-day as any similar examining board in any State in the American Union. It is doing good work and impartial work. Every man that goes before that board gets just what is coming to him and no more, and that is exactly as it should be.

As I said a moment ago, the great thing that appeals to me in your profession is the fact that you have not been satisfied. There

is no profession that has made the same strides as your profession has. You are all learning things. A few years ago if one got sick and sent for a doctor he would try to find out what was the matter with you, and would give you all the drugs he knew. He would take his chances in using them, hoping that one would meet the indication. Now, you are reducing your profession to a science. The greatest minds of the world are engaged in digging into the human brain and finding out all about its ailments, its capacities, its aims and its cures. You have not been satisfied; you have been looking to the future, and the glory of your profession is this: There has never been a time in the investigations, never been one minute when it was necessary that you men did not take your life in your own hands to further one of these investigations, and no doctor could be found who would not be willing to offer his life for the benefit of humanity. That is the kind of thing I believe all of us ought to have. We ought to have the divine spirit of discontent—not that miserable discordant discontent that makes us whine and growl and grumble at the existing order of things—but that discontent which seizes upon the actualities of life and sees these things are good, but that the human race is capable of better, and who justifies that faith by work and goes out to try to do more and have things that are better. The citizen I have the least respect for in the world makes the poorest man in your profession, and that is the citizen who takes the ground, "Oh, do not let us change; this was good enough for our fathers and it ought to be good enough for us." Suppose that had been the watchword of your profession; suppose that had been the slogan of the human race; suppose that all mankind from the beginning took the position that there was no use in striving to bring about a change, that what was good for our forefathers was good enough for us, the human race would be living in caves and bearskins. It has been the divine spirit of discontent reaching out for better and higher things that has led the human race onward and onward. We have got the citizen always with us. He is in your profession and mine, the fellow who does not want to make any change in anything—the fellow who is perfectly satisfied with existing conditions. Now, I am just as proud as any man in the world can be of what my fathers have done for this nation and in this State, but the fact that they did their duty in their own day and time according to their light is no reason why I should

congratulate myself upon that merely, but I should strive to do my duty in my day and time as they did in their day and time. Yet we have got the citizen always with us that, whenever you propose a change for the good in your profession or in mine, or when we propose a change for the good of anything in any walk of life, this individual will say it sounds good, but you can't do it. We have got him in all communities. I can look back, away back yonder, to the beginning of history—yes, even further than that—and imagine people gathering on some mountain side in the spring-time. I can see men sitting around the fire at night, and finally one fellow says: "Look here, it is getting warm; I do not believe I am going to wear a skin any longer; I am going out and catch two or three sheep, cut the wool off, and try to make a coat." And I can see them pull their whiskers and spit in the fire and say: "Hold on, boy, don't talk that way; our fathers have been wearing skins, our grandfathers have been wearing skins, and this here talk about making a coat is useless." However, he persisted in this, caught the sheep, and that was the first coat the world ever saw. I can imagine a fellow tired of living in a cave who said he was going to build a house, and I can hear fellows saying that it was useless to talk about building a house when their fathers and grandfathers lived in caves all the time. It sounds good, but you cannot do it. Nevertheless, he persisted, stuck four pins in the ground, put some kind of stuff in between them, and put palmettoes on for a roof. He managed to build a house, but was told that he could not do so.

If you go back and search through your profession, through all history, you will find that monuments have been erected to the soldiers, to patriots, to priests and physicians, but you will find every monument erected to every man and every woman in this world has been erected to some splendid genius who said it can be done, and who did it. In all the annals of time you will not find a single monument erected to a single man who said "You cannot do it." You have got to say you can do it, and you do do it. The greatest gift a physician can possess is the gift of walking into a sickroom and inspiring in that patient a feeling that he can cure him, and, when he can inspire that in his patient, 99 per cent of the battle is won. The very minute you get the thought in your mind that you can do a thing, you can communicate

that thought and that sentiment to others; but if you are possessed with the thought in your own conscience that you cannot do it, ninety-nine times out of a hundred you will find such a thought comes true—that you cannot do it. Therefore, it is absolutely necessary, no matter what we undertake, to have confidence in ourselves, confidence in our ability to do things. When we make up our mind that we can do a thing it is very easy to do it. When you make up your mind that you cannot do it, it is just as easy to fail; and, therefore, to go back to my text, if I had one, I would say this to you: You, the doctors of Louisiana, have a great work to perform in this State. You come in contact with the homes as no other set of men in the State come in contact with them. You are the advisers of the men and the women and the children of this land about that which is dearest to them—their health and their lives. We of Louisiana should endeavor to make every part of our State useful. We have a magnificent State. We have a soil that needs only to be cultivated; we have a climate so sweet and gentle that our herds and flocks can graze in the open every month in the year, and there is not a day but what the husbandman can gather something from his fields for the market. Our wealth of field and forest and factory is so great that we can hardly estimate it, and yet you and I both know that nothing but the outer fringes of our possibilities have yet been touched; that in the great State of Louisiana lies an El Dorado yet undiscovered, and you doctors in this State, who come in close contact with their people, should make up your minds that you will leave this message in every home and in every household: take as your motto the slogan from old Scotland's hills. You know that the feud had its idea in Scotland, how clannish the people were, and the feeling ran high. In that old land of hill and dale, after a scene of warfare prevailed, one chief led his clansmen against the other at his pleasure; but it is said in song and story that when the foreigners planted a hostile foe on Scotland's shore the fires were lit and dissipated through the hills of that old land, and the cry ran from one end of Scotland to the other, "Highlanders, shoulder to shoulder for Scotland!" Leave this thought in your people's homes as you go amongst them; fight as you will on all questions of policy and of politics; fight, if you must, one with the other when anything comes to the front for the benefit of Louisiana and its

people, when things are proposed and advocated for the advancement of this State, and let the cry ring from the hills down to the shores of our own Mexico: "Louisianians, shoulder to shoulder for Louisiana's prosperity, for her people's happiness!"

Clinical Report.

A Case of Von Jacksch's Anemia.

By E. P. A. FICKLEN, M. D., New Orleans.

The comparative rarity of this disease has led me to believe that a report of a case in an infant of seven months might prove of some interest, though the child did not present any symptoms that have not hitherto been noted. The child was brought to the Charity Hospital, service of Dr. Yenni, and the case is reported with his permission. Holt mentions the fact that, in the majority of cases recorded, the ages have been between seven and twelve months. In the present instance there is a clear history of the disease starting at the age of two months, and progressing steadily up to the time of death. The parents were Italians, who had been in this country for seven years, immigrants from Palermo. The family history was obtained through an interpreter, and seems to be fairly reliable. The following is a brief description of the patient's points in the case:

JOE M., age seven months; full born. *Family History:* Mother and father married about fifteen years ago. Were engaged in farming in Sicily, and now keep a fruit stand. The first child, a girl, died thirteen years ago, with the same symptoms that are given in this case, and after an illness of similar duration, at the age of nine months. For this reason the mother was on the lookout, and carried the child to a doctor as soon as she saw he was getting "pale." The other children are aged two, five and a half and eleven, respectively, and are healthy, with the exception of the oldest, who has had slight intestinal disorders.

Previous History: Child absolutely normal up to the age of two months. Has been strictly breast-fed.

Present Illness: At two months mother noticed that child was sluggish and had marked pallor. She became alarmed, remember-

ing the other case, and took it to a doctor. In spite of treatment, the sluggishness and pallor increased, but as the child did not appear ill-nourished it was carried around as usual. Six days before admission a cough, accompanied by some fever, set in, and home treatment proving unavailing, the child was admitted to the hospital, through the clinic, on March 10. The first point noticed on examination was the color of the skin, which was a light brown, or waxy tint. The sclera were china-white. The mucous membranes were pale. These appearances, combined with the cyanotic lips and the rapid respiration, gave the infant a look of extreme prostration.

Stimulation was administered, and the routine treatment for broncho-pneumonia, but the patient did not react. He sank steadily, and died March 15.

A point on which little stress was laid by his mother was that for the past two weeks the child's bowels had been deranged. The stools were frequent, foul, and contained mucus, but no blood. Careful questioning elicited no history of any other disease, save the anemia, the ileocolitis, and the terminal broncho-pneumonia.

Before the true blood condition was diagnosed it was thought that intestinal parasites might account for all the child's symptoms except the pneumonia. Careful examination, however, was negative for ova.

Physical Examination: Child of normal size, head well shaped, fontanelles normal for age. No emaciation; on the contrary, the child seemed plump. No edema is noticeable on careful examination. Reflexes normal. Eyes apparently normal. Heart action rapid, weak, but at time of admission regular. No adventitious sounds. Numerous spots of bronchial breathing throughout both lungs, with fine and coarse rales. Enlargement of the peripheral lymph nodes, an occasional symptom, was not found. The liver extended almost to the umbilicus in the median line; was firm, apparently not tender. The spleen was hard, projected downward $2\frac{1}{2}$ inches from costal arch, and the pointed tip was easily palpable. Cry frequent, but weak. Movements feeble.

Blood Examination: Hemoglobin, 10% (Tallquist scale).

Red cells per c. m. m.....	2,380,000
Color index .....	.2
White cells per c. m. m.....	250,000

Differential Count:

Small lymphocytes	67%
Large lymphocytes	90%
Large mono	3%
Basophiles	2%
Neutrophiles	16%

The report also remarks: "Apparent leucocytosis, poikilocytosis, polychromatophilia, anisocytosis, normoblasts, and megoblasts. A few myelocytes, all of them neutrophilic, were seen in one specimen. In several specimens, normoblasts undergoing mitosis, were found."

The blood was taken for the absolute count only a short time before death. Perhaps the findings were somewhat changed by this, but the diagnosis could be made with confidence upon a stained slide, and is, therefore, unshaken.

Unfortunately the parents, either intentionally or unintentionally, gave a false address to the hospital and to the undertaker, and permission for post-mortem could not be obtained.

I desire to thank Dr. Couret for his assistance in the blood findings.

Orleans Parish Medical Society Proceedings.

President, DR. B. A. LEDBETTER.

Secretary, DR. L. R. DEBUYS.

141 Elk Place, New Orleans.

In Charge of the Publication Committee, DR. L. R. DEBUYS, Chairman.
DR. HOMER DUPUY and DR. W. H. BLOCK.

MEETING OF JULY 10, 1911.

DISCUSSION OF DR. DUPUY'S PAPER.

DR. DEPOORTER: In line with this subject I beg to report a rare affection of the lingual tonsil—an abscess formation. Mrs. D., of Vicksburg, Miss., consulted Drs. Dupuy and DePoorter on May 2, 1910. She had been coughing violently for over a month. She felt a lump in the throat, and for over two weeks swallowed

with the greatest difficulty. There was swelling in the submental region. The laryngoscope revealed a large, smooth tumefaction in the lingual tonsil region. The anterior surface of the epiglottis was completely hidden by the swelling. Probing suggested the presence of fluid. A galvano-cautery puncture into the tumefied mass brought out pus, and pressure over the submental region increased this flow, proving that the fluid had percolated through the sublingual and submental tissues. The submental swelling appeared late in the course of the disease, the throat symptoms showing up first, which at once settled the question that the infection started in the lingual tonsil. Probing the parts daily very quickly relieved the dysphagia and cough.

MEETING OF JULY 24, 1911.

DISCUSSION OF DR. GROETSCH'S PAPER.

DR. WALET: In reference to Dr. Groetsch's case of large sub-mucous fibroid, I think he acted wisely. I rise more particularly to refer to the marked tolerance of the pregnant uterus associated with sub-serous fibroids, having delivered three different women, at full term, who presented in each case a sub-peritoneal fibroid of very large size. One of these cases was delivered safely in four consecutive pregnancies.

DR. KOSTMAYER: I wish to call brief attention to a phase of this question which neither Dr. Groetsch nor Dr. Chavigny mentioned—a rare occurrence in the gynecological service last winter, where two large fibroids were removed from a pregnant uterus, with much manipulation and actual delivery of the uterus through the abdominal incision. This case went to term, or at least left the hospital without having aborted.

Of course, if a uterine body had undergone fibroid degeneration to the extent Dr. Groetsch's illustration shows, enucleation is impossible. But, from Dr. Chavigny's description, the fibroids in his case were sub-peritoneal, and I felt like asking him: "Why not enucleate?"

Enucleation of fibroids from a pregnant uterus can so often be done successfully that it is well worth considering.

DR. GROETSCH (in closing): I will state that it was not a case of meddlesome surgery or desire to do a hysterectomy, but a case of

necessity. The fetus was incarcerated in Douglas' cul-du-sac, had only one wall that would distend, so consequently it was only a question of time until this one wall would rupture and expel fetus into abdominal cavity, causing death to both mother and child. Close examination of specimen will verify my statements.

DISCUSSION OF DR. PATTON'S PAPER.

DR. CHASSAIGNAC: I wish to mention a fact in corroboration of the main point made by Dr. Patton in his excellent paper. Long ago I noticed, in preparing the Mortuary Report for the JOURNAL, that almost every month, while there was one, or sometimes several, deaths from alcoholism among the whites, it was exceedingly rare that there was any at all among the colored. I state this because it would tend to show that the apparent difference is not due to conditions at the Charity Hospital alone.

DR. HUMMEL: For nearly four years I have been taking medical care of the city's indigent insane. Such patients were at first confined in a portion of a prison in the city. Through the proper efforts of several charitably disposed gentlemen and myself the authorities were prevailed upon to provide for the erection of a psychopathic hospital. This has been done, and this institution, with a capacity of one hundred, is now being conducted under my medical direction and that of Dr. H. Daspit, who is my assistant in the work. We, as a matter of course, receive all kinds of mental cases, including alcoholic psychoses. Our records are carefully and fully compiled and the diagnoses are all made from our direct observation of cases, and only after the case has been under sufficient observation to make the diagnosis rather certain. We have had 777 cases pass through our hands since the inception of the work, and out of this number a large number of alcoholic cases can be sorted. I regret that lack of time prevented my going over our records and making some statistics on the relative number of white and black alcoholic cases. However, upon reflection, I have no hesitancy in saying that our experience bears out a contention Dr. Patton has advanced. I recall only one case, at present, of an apparently full-blooded black suffering from alcoholic psychosis, and this was a woman. Now, on the other hand, I have in mind several pronounced instances of alcoholic psychoses in mulattoes. I believe that, as in the case of the deleterious action of syphilis and

several other agencies prevalent in civilized life, the deleterious influence of alcohol upon the pure-blooded colored race is practically nil as compared to that of the white; and that susceptibility to such deleterious agencies is carried to the individual by the admixture of white blood, mulattoes suffering accordingly. I am speaking with reference to the nervous system only, as it seems very probable that the negro's kidneys, heart and vascular system suffer in the same way from alcohol as in the case of the Caucasian race. His brain and nervous system are rather immune, because they are cruder and harder to hurt.

DR. MAGRUDER: Has had but little experience with alcoholism in negroes, but recently saw a striking example of tremens in a white man. A civil engineer by occupation, ordinarily took twenty drinks of whisky a day and performed his work without interference, until recently, when he had been taking about forty drinks daily, and as a result complained of feeling quite nervous and feeling in need of treatment.

DR. GROETSCH: I wish to bear out Dr. Patton's statement as to the apparent immunity of the negro to alcohol. As assistant coroner I have occasion to treat all the city prisoners, white and black, when ill. I do not remember but one case of delirium tremens in prison in several years in negroes. As to the scarcity of cases in the Charity Hospital, it might be explained by the fact that about the time the negro reaches that state of intoxication he usually "runs amuck," and when he does the police get him.

DR. PATTON (in closing): I am glad that Dr. Hummel has taken part in this discussion, as we know of the great experience he has had in dealing with disturbed psychic conditions. I have listened with particular interest to his account of the full-blooded young negress whom he saw suffering with delirium tremens. An important clinical fact that must be remembered in such a case is the constant association of pneumonia with acute alcoholism and of the active delirium that accompanies apical pneumonia, so that the delirium might possibly have been due to pulmonary involvement.

As regards the ease with which negroes usually recover from acute illness of any kind, some of those present will doubtless recall a very excellent paper read by Dr. C. Milo Brady before this Society on the "Negro as a Patient," and of Dr. Brady's comment on the fact that the sick negro is apt to be given active domestic

treatment with sudorific decoctions and purgatives, by which the elimination of toxic material from his system is favored, while the only nourishment allowed is a little thin broth. Such treatment, with the natural recuperative power possessed by a healthy animal, soon accomplishes the desired object. In the same way the system of the negro rapidly throws off the effects of alcohol, while his coarse brain fibre remains practically unaffected.

The corroboration afforded by Dr. Chassaignac's observation of the low death rate from alcoholism among our colored population, extending over the long period of his compilation of mortality statistics for the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL, is particularly valuable.

I am much gratified with the interest manifested in this paper. I realize that the subject is not new, but I think it well for us to crystalize our observations from time to time and to put them on record.

Communication.

Onion for Dropsy.

In the last issue of the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL Dr. E. M. Dupaquier, in a somewhat humorous and jocular vein, inspired, very likely, by the queerness and originality of the subject, relates an instance of what he considers as a new and rather funny therapeutic discovery—that of the “Onion Cure for Dropsy.” And, verily, this sounds as a vague and distant echo of the school of Salerno. “*Cur morietur homo . . .*” Were it not that the discovery originated in the French province of Gascony, a country proverbially given to extravagant, boisterous, and at times even preposterous claims and pretensions, the learned doctor would fain look forward auspiciously to new therapeutic wonders.

The truth of the matter is that this “onion cure,” so called, is by no means a novelty. It has simply been rescued from an ill-deserved oblivion. I would even add that it has never been abandoned. About the middle of the last century the onion cure for dropsy was advocated and put into great favor by Serres

d'Alais, of whom the cure since bore the name. Serres d'Alais was in his day an eminent clinician and scientist; a man known as a conservative, and yet progressive and judicious observer, not lightly to be tempted into puffing up a remedy merely for the sake of attracting notoriety. The results of his observations and experimentations were, moreover, investigated by the French Academy of Medicine, and favorably reported upon. The only point to be insisted on here is that, what is known as Serres d'Alais' onion cure, was in reality something more than the plain eating of fresh onions. The dropsical patient was made to take three times a day, during a month, a milk soup with bread, followed by the eating of onions after each meal, to the exclusion of any other food or drink of any kind.

Now, if we look upon this plan of treatment in the light of what we know to-day about the milk diet, supplemented by a cure of dechloration in the treatment of dropsy, anasarca, ascites, of whatever nature and cause, it is easy to understand that the would-be "onion cure" was apparently nothing else than a cure of milk and dechlorination, helped powerfully by the simultaneous suppression of any other food or drink of any sort. I do not mean to infer that the addition of the onion is ineffective and immaterial; I merely point out the possibilities arising from the combination of the milk diet, the cure of dechlorination, with the eating of onions. So far am I from detracting from the practical value of the cure, that I have seen it used extensively in the beginning of my medical career, even at the clinic of so remarkable a man as Prof. Spring, of Liège University, a learned and wideawake clinician, ever ready to avail himself of anything that offered any chance of usefulness. Encouraged by his teachings and authority, I must confess to having myself several times resorted to this combination, and most always with satisfactory results.

The last time I resorted to this plan of treatment was on a patient suffering with ascites and general dropsy, the result of a cirrhosis of the liver. He was a man 33 years old, without any previous history of illness; no syphilis, no alcoholic habits. The liver trouble had crept on him insidiously, and finally vanquished by the cachexy, the ascites and the general dropsy, the unfortunate had to repair to New Orleans to be intrusted to the care of Dr. G. B. Twoappings had already been performed, and, in view of

the rapid reappearance of the effusion, necessitating repeated tapings, he was sent home to be treated and to die in his family. When I saw him for the first time on the 5th of June of last year the ascites was enormous, as well as the general dropsy.

The diaphragm was highly pushed up, the abdomen terribly distended, rendering the decubitis difficult and the breathing laborious. There were signs of hypostatic congestion, with edema of both lungs; the skin was jaundiced, the feces absolutely discolored and mealy; the urine was scant, very bilious, turbid, with considerable albumen. There was, in short, a combination of cirrhosis of the liver, with some Bright's troubles—an association by no means uncommon, but of a very unpromising nature.

The first, and, in fact, the only medicine I ordered, was a course of four days of theobromin, ten grains three times a day, as a heart stimulant, and in view of promoting urinary function. In such cases as this I have always found the theobromin of incomparable value. In a few days the quantity of urine had remarkably increased. I immediately instituted a strict cure of dechlorination by means of milk given at the rate, first, of two quarts a day, and afterwards of three quarts, more or less, according to the ability of my patient to digest it. Morning, noon and night a soup made with one pint of milk and two slices of bread was taken, followed by the eating of a white onion. The rest of the milk was given between those meals, so as to supply the daily amount. Any other food was strictly forbidden.

In a few days the urinary function had taken on a tremendous proportion; it looked as though the faucet of a cistern had been turned on. Inside of two weeks the dropsy had left the legs entirely; the scrotum was free, and the most part of the ascites was gone. All signs of edema and of the hypostatic congestion of the lungs had by this time disappeared, and at the end of four weeks all trace of ascites had entirely vanished. The treatment was persevered in for one more week, on a smaller scale, rather in view of assuring the cure. In the meantime the disappearance of the ascites had made possible an examination of the liver. It was found descending in the abdomen by about three inches below the ribs, the left lobe projecting towards and into the hypochondrium.

The surface was hard and smooth, without any corrugation; the edge was sharp, free from any indentation or any irregular projec-

tion. To the physical examination it looked in every way as intermediary between the atrophic and the hypertrophic cirrhosis, a form known only of late years, and to which the denomination of "mixed cirrhosis" has been given by Dieulafoy, as, clinically and anatomically, it seems to belong partly to atrophic and partly to hypertrophic cirrhosis. Whatever it be of this clinical disquisition, all the troublesome symptoms which had threatened life had entirely disappeared in the course of a month, which corresponds strictly to the period of treatment assigned by Serres d'Alais. On the 18th of July—that is, six weeks from the beginning of the treatment—my patient, to all intents and purposes a well man, returned to his work as engineer on a large plantation, and resumed all his duties, with the only recommendation of continuing his milk diet, mitigated by some additional food, without the addition of any salt.

A case like this, in the days of Serres d'Alais, would doubtless have been looked upon as the result of onion cure; it contains all the elements of what Serres d'Alais recommended as his milk cure. To-day we would rather be inclined to look upon it as the result of a milk and dechlorination cure, without questioning in any way the therapeutic value of the onion. Whatever may be its worth, attested by many observers, we don't see any philosophic reason for denying "a priori" all efficiency to this useful representative of our gardens, any more than for conceding all value to other time-honored medicinal plants whose virtues are extolled every day, without their intrinsic worth being better understood or disclosed.

Unfortunately, the "*post hoc ergo propter hoc*" has always proved and will ever be the greatest stumbling block in the correct appreciation and the true interpretation of therapeutic results; and this, by the way, serves to explain up the multiplicity and the inconsistency of methods and theories brought about every day at the fancy and ingenuity of experimenters.

As has so often been remarked, the value of a medicament or of a therapeutic discovery is dependent almost as much on their moral impression as on their material effect. The miracle of the bread pill is repeated every day. Strange as this may seem, it is our moral attitude, something akin to the "expectant attention," which imparts to many medicaments their real or fancied value, and their efficacy, real or supposed, endures just as long as does

the faith and confidence of the physician and the patients in their virtue.

"Anything is of value," says Moebius, "providing only that the patient is led to think that it is."

In spite of the wonders of modern therapeutics, but, alas and alack, in spite, too, of the puffism of the "made-in-Germany," so rampant to-day, of this deluging mass of incoherent remedies foisted unsparingly on a deluded public, and on a still more bewildered medical profession, we may repeat what old Horace said thousands of years ago:

*"Multa renascuntur quae jam ceciderunt,
cadent quae quae nunc sunt in honore."*

DR. A. DELCOURT, SR.

Houma, August 13, 1911.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

The Cause of Beriberi.

Until comparatively recently the etiology of beriberi was doubtful, and various theories were entertained concerning it. Gradually the use of polished rice, in the large quantities which constitute the natural and economical diet of Oriental natives, has gained ground as a causative factor.

Additional and valuable information in this line is furnished by the interesting report on the eradication of beriberi from the Philippine native scouts by Major Weston P. Chamberlain, of the United States Army, president of the Board for the Study of Tropical Diseases as they occur in the Philippine Islands, and well known to us here in New Orleans.

The Philippine scouts consist of about 5,000 Filipinos serving as infantry, officered by Americans and under the control of the War Department of the United States.

In 1910 important changes were made in the rations of the scouts. These consisted mainly in the reduction of the daily amount of rice per man to sixteen ounces instead of twenty ounces, the substitution of unmilled rice for the highly polished grade formerly used, and the addition of various leguminous foods to the diet.

Major Chamberlain shows that there was a great reduction in the beriberi admission rate to the hospital for 1910, and that the relationship between the decrease of beriberi and the changes in the dietary was evident. The bearing on the beriberi rate of factors other than the dietetic was carefully studied and the following conclusions were drawn as a result of the entire investigation or experiment.

1. Beriberi has disappeared from the Philippine Scout organizations since about the middle of 1910, eighty per cent. of the cases

having occurred during the first quarter of the year, when the ration changes were just being put into effect.

2. No sanitary improvements have been made outside of the dietary and no corresponding decrease in the admission rate for other diseases occurred.

3. The occurrence of beriberi in the general Filipino population was not correspondingly decreased.

4. The decrease in admissions for beriberi among the Scouts was marked for four months before the use of undermilled rice began.

5. This decrease was noted also before the increase of legumes was made in the ration.

6. As the decrease could not be due to coincidence, it must have been due mainly to a reduction in the amount of rice and the addition of the legumen.

7. These facts not only do not oppose the polished rice theory of beriberi production, but support it.

It may be added that the harmful influences of polished rice are not thought to be due to any injurious element present in such rice, but to the absence of some substance necessary for proper nutrition, and it seems evident from Major Chamberlain's valuable report that the *reduction in quantity and the use of undermilled rice* are sufficient to prevent the occurrence of beriberi.

The importance of this conclusion will be appreciated when it is recalled that at the time of a visit to Panama, about six years ago, beriberi was given as the most prolific cause of death, and this holds good, to a greater or lesser extent, for a vast amount of territory.

The Public is Interested.

The effort to crush our friend Wiley, head of the Bureau of Chemistry in the Agricultural Department, has stirred up a veritable hornets' nest, and as to how many may get hurt it is impossible to conjecture at this time. Mr. Taft has an excellent opportunity to show his real spirit of reform by adopting radical measures in the household of the Agricultural Department. There is little chance for side stepping, for this time the public is interested and the entire press is filled with a discussion of the merits of the case.

We hold no brief for Dr. Wiley, but whatever his shortcomings may be or may have been, they cannot be attributed to a lack of zeal in the public welfare. Wiley has at all times fearlessly attacked the evils of adulteration, and whatever of progress in pure food and drug regulations has come about in the past ten years may be credited to him.

So much remains to be done, however, that it would be a short-sighted policy which could at this time destroy the usefulness of so staunch a champion of righteous methods.

The public is indeed interested in the investigation now in progress and in the results, which may be so far reaching. It is useless to look for the initial motive which directed the attack on the bureau chief; he has been too long fencing and driving at the "interests" not to have created an animosity which watches every chance to strike back.

Meantime, and no matter what may eventuate, we may hope for the justification of Wiley, and for the reasons we know for certain. Every nostrum must advertise its adulterants, percentage of alcohol, or poisonous drug, and food stuffs may not travel under any disguise. The manufacturers must be honest in their labels and this may promise as much for the contents of the packages carrying commodities.

The temper of the public is ordinarily placid and long suffering, but anything which obviously attacks the integrity of the home, even so far as provender is concerned, will tend to excite a rebellious spirit, and the tempest in the Agricultural Department teapot may spread to a great political significance, expressing itself through the vote of the people, which is certainly interested.

A Notable Merger.

What was considered almost impossible of accomplishment has been brought about by the merging of the Medical Department of the University of Nashville and the University of Tennessee with that of Vanderbilt University. Nashville has contributed many graduates to the field of medicine in the South, and it is a matter of general gratification and congratulation.

lation that this great city of our Southland should now have but one school, destined to be great.

The new Vanderbilt Medical Department has every reason now to move up in the vanguard and to take its place with the colleges working for higher standards of medical education. With an active competition at home and no less active competition abroad, it may be understood and condoned that this school has been slow to move, but now Vanderbilt should take its place with Virginia, Texas and Tulane in making the new era of medical education in the South.

The newly organized faculty is thoroughly representative and the promise of enthusiastic progress is assured.

The Equitable Life Assurance Society and Disease Prevention.

A move to be commended is the recent establishment by this society of a "Conservation Department," with Mr. E. E. Rittenhouse, former Insurance Commissioner of Colorado, in charge, with the title of "Conservation Commissioner." This department will give special attention to the conservation of business, and in connection with the Medical Department, to the conservation of health. Our readers doubtless will be interested in a brief outline of the program to aid in the warfare against disease.

The society hopes to assist policy-holders through educational (health circulars, etc.) and perhaps other methods. It believes that policyholders and the public in general, in order to get the full benefits of the science of preventive medicine, should get in closer relation with the family physician, and that they should get in the habit of going to their family physician for health examinations with reasonable frequency, in order that the doctor may have an opportunity to guide them into healthful modes of life, and to detect disease in its incipient stages when it may be checked or cured.

In order to assist in stimulating public interest in the work and progress of the Public Health Departments, members and representatives have been asked to take every opportunity to

strengthen the hands of public health officials in the enforcement of public health regulations, and to take individually, as citizens, an active interest in public health matters.

Assistance will be along the lines of prevention. The society will engage in no political contests, nor in discussions of the merits of the different so-called schools of medicine. If it desires formally to present its views upon any contested measure, the representative selected will be instructed in writing, otherwise no person is authorized to officially act for the society in such matters.

It will be glad to have its Conservation Commissioner advised of important moves and events in public health departments in the general warfare against disease in order that representatives and members may be kept informed upon this subject in its official publication, in order to familiarize the great body of American citizens with the benefits already derived from the public health service, and the further benefits that will come if that service is properly supported by public sentiment.

Abstracts, Extracts and Miscellany.

Charity Hospital Bulletin.

In Charge of DR. J. A. DANNA, House Surgeon.

Double Hydrocele of Unusually Large Size—Operation.

REPORTED BY W. S. BERRY, RESIDENT STUDENT.

William Giles, aged 31 years, colored, was admitted to a surgical ward of the Charity Hospital, service of Dr. Gelpi, on July 1, 1911, for hydrocele, presenting the following history:

Father was married twice; got eight children by the first wife, and one by the last, the patient being the only child of the last wife. One sister died from typhoid; no history of tuberculosis or cancer in family. He smokes and drinks in moderate amounts. Had typhoid about 14 years ago and pneumonia a few years later. Seven years ago he was attempting to ride an unbroken horse, and was thrown upon the horn of

his saddle, with the result, he receiving a very severe injury of the scrotum and testicles. He says that he suffered most from injury on right side of scrotum and was compelled to remain in bed for four days. The right testicle became very tender and slightly swollen. The tenderness was relieved by treatment; the swelling never disappeared entirely. About three years later the right side of scrotum became very large, and one month later the left side began to increase in size. He then went to a doctor for treatment. The treatment, as well as he could describe, was by the use of an electric needle. This reduced the swelling to almost normal size. A few months later the swelling became larger than before; so he was tapped and five pints of fluid removed from the two sacks. Four months later three and one-half pints were removed by same method. Four months later two pints were removed, and three pints removed four months after this. He then tired of having the fluid removed by this method and had nothing done for him for six months, and came to the hospital.

EXAMINATION: Patient is well nourished and very muscular. Lungs, heart, kidneys and liver found negative. His gait was that of a man carrying a large bag between his legs. His feet were several inches apart when he would stand erect. His scrotum hung almost to his knees, and he made the remark that "it hung a little below his knees before he began wearing the suspension." The penis was concealed; a small part of the prepuce marked the site of penis.

OPERATION: Under spinal anesthesia, a partial Winckelman's operation was done on both sides. The sac was opened as in Bergmann's operation and the contents drained away. From the right 1500 c. c. was removed and 1350 c. c. from the left. The parietal layer of the vaginalis was nipped off. The testicle was then completely extended from the tunica and turned inside out and held thus by a few stitches. The parietal layer being very vascular a few interrupted stitches were put in along the side of the incision. The testicle was put back in the scrotum and the loose tissue of scrotum was caught up with a few cat gut sutures. The scrotum was closed by bringing the two ends of original incision together, in this way

GUNSHOT WOUNDS TREATED IN THE CHARITY HOSPITAL, NEW ORLEANS, LA., FOR THE YEARS 1899 TO 1908, INCLUSIVE.

COMPILED BY CARROLL W ALLEN, M D



making the scrotum shorter. Cat gut No. 1 was used to close scrotum. Sent to ward in good condition; developed slight temperature the next day and ran a slight septic temperature for several days; never higher than 101.5 F. This temperature was due to the absorption of fibrous ferment. The scrotum became slightly edematous, but this soon went down.

The sac on the right side showed no evidence of any old injury; the sac was a little thicker than that of the left side, and extended up nearer to the external ring. At first it looked very much like it was complicated with hernia, but such was not the case. On the left side the epididymis was displaced from its original site about two inches, but was not completely detached from testicle. The tissue intervening between the testicle and epididymis was thickened. Both testicles were found in good condition.

He left the hospital in good condition and the scrotum was only about twice as large as original. Was unable to get a picture of him after operation.

Statistics of Gunshot Wounds,

(SEE INSERT.)

The appended table was compiled to show the large number of gunshot wounds of all kinds treated at the Charity Hospital for a period of ten years, giving their classification and mortality.

The number is greatly in excess of those treated by many other large hospitals of the country drawing from an equally populous territory, and while it may not be a favorable reflection upon our population, it furnishes the surgeon with much valuable experience in studying the treatment and results of these injuries.—CARROLL W. ALLEN.

Louisiana State Medical Society Notes.

In Charge of DR. JOSEPH D. MARTIN, Secretary, New Orleans.

THE EAST FELICIANA PARISH MEDICAL SOCIETY held its regular August meeting at the office of Secretary-Treasurer Dr. R. P. Jones, in Clinton, on August 9th. Owing to a combination of circumstances the attendance was not as large as usual, though there were twelve members present. A fact worthy of note was that two of these twelve members are over 70 years old, have been in the harness a half century, and that they both had to drive sixteen miles over rough country roads to be present. This speaks well for both the society as well as the enthusiasm of these two old war horses still in the practice. One of them, Dr. W. D. Wall, of Slaughter, read a most interesting paper on the use of the alkaloids in practice, but especially in the treatment of malaria. Dr. A. F. Barrow, of St. Francisville, was also present and joined in the general discussion of medical subjects. The meeting was followed by the usual good dinner at the Rist House, after which the society adjourned to meet October 4th. This is the liveliest country society in the State, meeting every other month and doing a good work for the doctors.

INCREASE IN ANNUAL DUES PROPOSED.

THE SHREVEPORT MEDICAL SOCIETY at its August meeting passed the following resolution:

“Resolved, that it is the sense of the Shreveport Medical Society that the annual dues of the State Society be increased to \$4 per annum, the extra dollar per capita being appropriated to the local society, which entertains the State Society during the annual session; and that the members of the State Society be notified of this resolution through the medium of the Official Journal.”

The object of publishing this is to let the other local societies take up the matter and act on it, so that, if it is brought up before the House of Delegates next year, each component

society may have had a chance to discuss it with their respective delegates. Favorable action on this resolution would enable the smaller cities of the State to entertain us, in their turn, without any danger of lack of funds or of imposing unnecessary hardships on the liberal givers.

Fraternally yours,

ARTHUR A. HEROLD, Secretary.

Medical News Items.

THE EAST FELICIANA MEDICAL ASSOCIATION held its meeting on August 10. Dr. W. D. Hall, of Slaughter, read an interesting paper on the subject of "Alkaloids of Medication." At the close of the meeting the association partook of a banquet at the Rest House with their invited guests.

HAMMOND BOARD OF HEALTH ORGANIZED.—The Board of Health of Hammond was organized on August 10, with Dr. E. L. McGehee, Sr., president; Dr. J. L. Robinson, vice-president, and John A. Ross, secretary. The other members are James Jumonville and L. D. Spencer. The appointment of a health officer was laid over until the next meeting.

OUACHITA PARISH MEDICAL SOCIETY held its annual banquet on July 15, at Monroe, La. The guest of honor was Dr. R. O. Simmons, of Alexandria, president of the State Medical Association, who, in the course of the evening, delivered the principal address. The members and guests present were: Dr. F. C. Bennett, president of the Ouachita Parish Medical Society; Dr. C. P. Gray, secretary; Dr. William Sandel, Dr. I. J. Newton, Dr. R. W. Foulk, Dr. D. H. Key, Dr. R. H. Blackman, Dr. G. M. Trezevant, Dr. J. L. Adams, Dr. G. M. Snelling, Dr. R. W. O'Donnell, Dr. H. D. Catlett, Dr. J. Q. Graves, Messrs. Barkdull Faulk, Peyton Oliver and Armand McHenry, medical students, and representatives of the press.

THE AMERICAN PROCTOLOGIC SOCIETY.—The next meeting of the Society will be held at Atlantic City, N. J., in 1912, the hotel and exact date to be announced later. The names of the

officers of the current year are as follows: President, John L. Jelks, M. D., Memphis, Tenn.; vice-president, Alfred J. Zobel, M. D., San Francisco, Cal.; secretary-treasurer, Lewis H. Adler, Jr., M. D., Philadelphia, Pa.; executive council, George J. Cook, Indianapolis, Ind., chairman; John L. Jelks, M. D., Memphis, Tenn.; Dwight H. Murray, M. D., Syracuse, N. Y.; Lewis H. Adler, Jr., M. D., Philadelphia, Pa.

THE INTERNATIONAL DERMATOLOGICAL CONGRESS POSTPONED.—This congress was to have been held in Rome the end of September but for various reasons has been postponed to April, 1912.

THE AMERICAN ASSOCIATION OF CLINICAL RESEARCH will hold its third annual meeting on September 27 and 28, 1911, at the lecture hall of the Boston Society of Natural History.

COUNCILLORS OF STATE SOCIETY.—The Louisiana State Medical Society at its thirty-second annual meeting elected the following councillors: First district, Dr. Paul E. Archinard, New Orleans; second district, Dr. Hermann B. Gessner, New Orleans; third district, Dr. Henry L. Ducrocq, Lafayette; fourth district, Dr. Randall Hunt, Shreveport; fifth district, Dr. Isaac J. Newton, Monroe; sixth district, Dr. Louis G. Stirling, Baton Rouge, and seventh district, Dr. Ladis Lazaro, Washington. Dr. Clarence J. Edwards, Abbeville, is the new chairman of the House of Delegates, and Dr. Laurence R. DeBuys, of New Orleans, was re-elected secretary.

PERSONALS: Dr. Homer Dupuy has been appointed a member of the State Medical Examining Board to succeed Dr. E. L. McGehee.

Dr. J. F. Piggott, of Covington, was named president of the Parish Board of Health.

At a recent meeting of the Police Jury of Covington Dr. G. B. Adams secured an appropriation to aid the hookworm fight.

Dr. M. Feingold has returned from a six weeks' vacation spent in North Carolina.

Dr. H. D. King has returned from a European trip.

REMOVALS: Dr. J. M. Adams, from St. Joseph, La., to Duncan, Oklahoma; Dr. G. H. Setzler, from Hamburg, Ark., to Crossett, Ark.; Dr. J. E. Edwards, from Morley, La., to Littleton, Ala.

MARRIED: On August 9, 1911, Dr. Edmond Norbert Landry, of New Iberia, La., to Miss Alva Turner, of this city.

On June 22, 1911, Dr. I. C. Fowler, of Oak Grove, La., and Miss Goldie Parr, of Louisville, Ky.

DIED: On July 27, 1911, at Jackson, Miss., Dr. H. H. Hughes, aged 42 years. On July 19, 1911, at Knoxville, Tenn., Dr. S. L. Jones, dean of the Medical Department of the Lincoln Memorial University.

TULANE NOTES.

SOJOURNERS IN EUROPE: Quite a number of the teaching staff have been abroad this summer, most of them for purposes of study. Dr. J. D. Weis at the Liverpool, London and Hamburg Schools of Tropical Medicine; Dr. A. C. Eustis, in the laboratory of Van Noorden, in Vienna; Dr. J. T. Halsey, in Vienna and Munich; Dr. C. J. Miller, in Germany; Dr. M. Shlenker, in Vienna; Dr. H. E. Menage, in London and Paris; Dr. R. Matas, in Paris, Madrid and Brussels; Dr. M. Couret, in various cities.

Among those who have been away on vacation may be named Drs. C. W. Duval, Gustav Mann, A. L. Metz, Isadore Dyer, J. B. Elliott, W. W. Butterworth, C. C. Bass, etc.

Tulane has been represented at the King's County Hospital, Brooklyn, during the past year by Drs. W. M. Lett, J. C. Hardy and Charles C. Elebash.

Two new professors are announced for the session of 1911-12: Dr. C. Jeff Miller, professor of clinical obstetrics and clinical gynecology, and Professor Creighton Wellman, professor of tropical medicine, hygiene and preventive medicine.

Regular courses in these last named subjects are to be inaugurated and about \$8,000 per annum for five years have been donated for the purpose. The United Fruit Company has given \$5,000 per annum and private donations in varying sums have been made in addition. The hope is entertained that by the opening of the session of 1912 some large endowment may be realized, great enough to establish a School of Tropical Medicine in Tulane.

The prospect for the coming session is good and it looks as if the preparatory year, the first of a five-year schedule, will be quite popular. This course is intended for high school

graduates lacking the sciences and has been established to meet the probable five years' course now under deliberation in the American Medical College Association.

With the resignation of Dean Walter Miller, of the Academic Colleges, and his acceptance of a position at the University of Missouri, the vacancy in the deanship has been filled with the appointment of Prof. A. B. Dinwiddie. This selection of the Board of Administrators will meet with the approval of all alumni and friends of Tulane who have had the opportunity of watching Prof. Dinwiddie's loyal work for Tulane in the past years.

Prof. W. H. P. Creighton has been made dean of the Engineering Department, thereby receiving a deserved personal recognition of service as well as a recognition of a worthy department of the university.

The Board of Administrators have approved the recommendation of the faculty of the Medical Department to erect a memorial tablet to Mr. and Mrs. A. C. Hutchinson. Beautiful designs have been drawn by a local sculptor and it is expected that the work will shortly be in its place at the Hutchinson Memorial.

Required athletics will be enforced in the freshman medical this year, and practically all the lectures in all classes will stop at 4 o'clock to allow the use of the gymnasium and field by medical students of all years.

The commencement in 1911 will be the last Wednesday in May, the 29th, nearly two weeks later than heretofore.

The dean of the medical college is preparing a catalog of the alumni of the medical department, and all graduates of all years, 1834 to 1911, are requested to send in their present addresses.

PERSONALS.—Dr. Jerome Triolo, of the class of 1910, recently returned to El Paso, Texas, after a stirring experience as surgeon in the army under Madero in Mexico.

Dr. E. B. Brannin, of the class of 1910, was married on July 3 to Miss Mary Fidelia Skiles, of Sherman, Texas. Dr. and Mrs. Brannin will make their home in Dallas.

IN MEMORIAM.—Dr. Albert J. Mayer, of the class of 1902, who died on January 14, 1911, has been memorialized by the Touro Infirmary in a simple, but seaking, tablet erected in honor of his faithful service to that institution. Exercises were held on June 11, and several addresses were read commemorative of the occasion. The tablet reads as follows and expresses much: "Dr. Albert J. Mayer, 1878-1911. First Junior Surgeon appointed to serve in this clinic after the reorganization of the Medical Staff on December 9, 1906. Devoting his best efforts to the suffering poor, he won the respect of his associates, who affectionately inscribe this tablet to his memory."

The following resolutions were adopted by the medical faculty on August 9 and sent to the *JOURNAL* for publication:

Whereas, Professor Stanford Emerson Chaille, A. M., M. D., LL.D., began his professional connection with the Tulane University in March, 1853, thereby casting the first link of the unbroken chain of love and devotion which bound him to his Alma Mater during the remaining sixty years of his pre-eminently useful life; and, inasmuch as he taught ten years as demonstrator of anatomy (1858-1867), one year as lecturer and professor of obstetrics (1865-1866; 1876), forty-one years as professor of physiology and pathological anatomy (1867-1908), seventeen years as professor of hygiene (1891-1908), and finally, when elected dean of the faculty in 1885, he discharged the onerous duties of this office for twenty-three years (1885-1908), in addition to the teaching of physiology, pathological anatomy and hygiene, which he brilliantly expounded from his three different chairs, he, after half a century of active service (1858-1908), closed his official career as an educator and administrator, leaving behind him an unparalleled record of success which exalted the reputation of this college as an institution of learning; and since as demonstrator, professor and dean he devoted the labor of his life and made the prestige and prosperity of the Medical Department the goal of his ambition; and, again, because during the three years of his retirement, his solicitude for the welfare of the Medical Depart-

ment never waned until all thought was extinguished by death, May 27, 1911.

Resolved, That Stanford Emerson Chaille, endowed by nature to a rare degree with the highest intellectual gifts and the strongest attributes of a manly character, was distinguished by a commanding personality which towered so conspicuously above the common level that he was immediately recognized among his fellows as a born leader of men. His large and accurate knowledge of affairs, keen perception and extraordinary capacity for quick, logical analysis, unswerving adhesion to truth, right, justice and principle, gave his judgment an unerring quality which, combined with an unconquerable determination, explained his great sway over men and made him an executive officer of the highest order.

No wonder that, as an army officer, as medical director of hospitals, as surgeon general of militia, as head of investigating government commissions, or as dean presiding over the destinies of a great medical college, his superiority promptly asserted itself and his powerful will was stamped upon all proceedings in which he participated with results that invariably confirmed the wisdom of his counsel and the rectitude of his actions.

As a teacher, his technical skill, scholarly attainments and unsparing discipline of himself in the vigilant acquisition of the most useful knowledge, his direct, forceful language, his wit and humor, his resourcefulness in illustration, lucidity of exposition and fine sense of proportion, made him not only the most impressive and magnetic lecturer in the faculty, but established his fame far and wide as a public speaker and convincing orator in a manner unsurpassed by any medical man in the South.

As a writer his published contributions, amounting to over 160 references, cover a multitude of subjects that relate not only to medicine and the allied sciences, but to great public questions. Some of these are large and elaborate treatises, all attesting his varied and immense knowledge, his mental breadth and comprehensiveness of view, his rigorous precision in the statement of facts as well as the same lucidity of expres-

sion and charm of style which made the written word almost as attractive as his spoken utterances. In addition, they showed an untiring industry and productiveness in the midst of the most distracting official occupations. While this large bibliography only partially represents the product of his literary activities, it amply establishes Dr. Chaille's claim to imperishable recognition as an authority of national reputation in State medicine, medical jurisprudence, medical organization, in the study of tropical problems, and especially in yellow fever, in public hygiene and sanitation, in medical education, and in everything that appertains to medical sociology, in all of which he was largely guided and stimulated by his incessant desire to improve and benefit the medical profession and the people of Louisiana and of the South, whom he loved with fervid patriotism.

While Dr. Chaille's greatest services to the commonwealth were rendered as a professional educator, scientific investigator, medical statesman and as a citizen ever ready for duty in the struggle against political oppression and misrule, he was, above all, a Confederate veteran whose heart was set aflame by the mere mention of the "Lost Cause." He served throughout the war, first as a private, then as a surgeon on the field, and afterwards as a hospital surgeon and staff officer, then as a captive and pardoned rebel, and, finally, as a free citizen, sharing "the same duties and the same joy, grief, despair and hope" that came to the lot of the "men in grey," whose heroic deeds and achievements he, as few others, could tell with a soul-stirring vividness and eloquence.

Resolved, That in the death of Stanford Emerson Chaille, the Medical Department of the Tulane University of Louisiana deplores and mourns the loss of its most distinguished alumnus, its most eloquent teacher, and as dean, its wisest counsellor.

Though retired from active service at the time of his death, his influence and his services in the uplifting and safeguarding of this institution, in a most difficult evolutionary period of its history, entitles his memory to the lasting admiration and grateful remembrance of his associates, his successors and of the alumni, who from 1862-1908 number more than three thousand four hundred medical men whom he helped to educate.

To these his memory will remain a vivid recollection which will continue to grow, a gigantic and legendary figure, as the traits and sayings of this remarkable man are handed down to posterity from one generation to another.

The medical profession of New Orleans has lost its Nestor, its most honored leader, and the State of Louisiana has been deprived of a citizen unsurpassed for patriotism and for worth. His many friends, and especially those who were nearest him by the privilege of a longer association and comradeship in the service of this institution, will miss "a heart to love and a hand to help them;" they will listen in vain for the voice that had the magic to soothe with the tenderest sympathy in hours of sorrow and to thrill the soul and inspire to action the weary of struggle and disappointment.

Nor shall the honey of his praise for deeds well done be ever again the sweetest nectar tasted by those who loved him and knew the value of his approval.

To his beloved daughter and her sons, to whom he left the precious heritage of a name that is indelibly associated with all that is best and loftiest in the traditions and aspirations of this community, the members of this faculty can only express a sympathy born out of a common grief.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of respective publications. The acceptance of a book implies no obligation to review.

Hieronymus Fracastor's Syphilis, From the Original Latin. The Philmar Company, St. Louis, 1911.

Published by Fracastor in 1530 as a beautiful poem, this work has earned eternal fame for its author. It is now presented in the form of a translation in prose, the name of the translator unmentioned, and is divided in three parts.

The first book traces the history of the disease back to a mythical origin, and includes a good clinical concept of the affliction. The second is devoted to the diet and treatment of the malady, and a quotation will

show how "up to date" our author is to-day: "That which is most essential to a cure is to surprise the disease at its inception, to strangle it before it has time to invade the viscera. For when it has penetrated into the organism and developed its ravages, it is but at the price of rough experience that one can succeed in expelling it." Further, he says: "The action of mercury on the scourge is marvelous," and describes how it was used associated with lard, and how inunctions and sweating should be resorted to. The third book relates the legend of the discovery of guaiac, and describes its virtues.

This octavo of only about fifty pages, printed on hand-made paper, in library binding, may be read in about an hour, and is fascinatingly interesting. It gives much food for thought, and well repays its reader.

C. C.

Hospital Management. Edited by CHARLOTTE A. AIKENS. Illustrated. W. B. Saunders & Co., Philadelphia and London, 1911.

The editor of this work contributes an excellent article on the Training School and Its Management—altogether some fifty pages. The rest of the book is quite pretentious and is a compilation of articles written by various contributors—most of them experienced in hospital direction, management or association.

Beginning with a history of hospitals in America, the text furnishes information on almost every important topic related to hospitals. There are included discussions of the economic, medical, financial, domestic and proletarian features.

Altogether an excellent contribution for those interested in the detail of hospital supervision and management.

DYER.

Progressive Medicine. Edited by HOBART ANTHONY HARE, M. D., and LEIGHTON F. APPLEMAN, M. D. Vol. XIII, No. 2. Lea & Febiger, Philadelphia and New York, June, 1911.

This volume of *Progressive Medicine* contains articles on Hernia by Coley, Surgery of the Abdomen by Gerster, a Review of Diseases of the Blood by Stengel, a Review of Gynecology by John G. Clark, and a Review of Ophthalmology by Jackson. The usual high class of illustration is in evidence.

Stengel's comprehensive review of Pernicious Anemia is timely and well worth reading; associated with this subject, chlorosis, leukemia, Addison's disease, chloroma and purpura, are discussed at length.

The many excellent abstracts provided cover a large field of subjects and must be read to be appreciated.

DYER.

State Board Questions and Answers, by R. MAX GOEPP, M. D. Second edition. W. B. Saunders & Co., Philadelphia and London, 1911.

This compilation has become standard in its particular field, and the revised edition contains questions asked during the past four years by the Examining Boards in the more representative States.

The material is arranged according to subjects, in each of which the question and answer are succinctly set forth in clear fashion, easy to follow. With the index, over seven hundred pages are included between covers.

DYER.

Education and Preventive Medicine, by NORMAN EDWARD DITMAN, Ph. D., M. D. Columbia University Press, 1911.

This brochure should be read by every intelligent citizen—interested in the consideration of a better race. The subject is discussed in a practical manner, and at the same time replete with historical and statistical references and tables, which only emphasize the argument. Each of the epidemic and incidental diseases of infectious and contagious type is discussed from the morbid and sanitary aspect, and the methods of prevention practised and available are related.

In addition, conditions affecting society, hereditary influences and sociologic problems, related to preventive medicine, are set forth strongly.

The author makes the plea for a broad education of physicians, sanitarians and of the public, and submits that every large center of population should give systematic instruction in preventive medicine to the public and to the professional teachers and others at a school connected with the local college or university.

Such publications should be spread among a large audience for the good they may do. DYER.

Golden Rules of Pediatrics, by JOHN ZAHORSKY, A. B., M. D. C. V. Mosby & Co., St. Louis, 1911.

In getting out a second edition of this little book the author and the publishers satisfy the demand for a practical guide to the symptoms and indications in child affections. The book is full of practical suggestions, epigrammatically presented by a writer of evident clinical experience. DYER.

Publications Received.

LEA & FEBIGER, Philadelphia and London, 1911.

A Manual of Pathology and Morbid Anatomy, by T. Henry Green, M. D., F. R. C. P.; second edition, revised and enlarged, by W. Cecil Bosanquet, M. A., M. D., F. R. C. P.

A Manual of Clinical Diagnosis by Means of Laboratory Methods, by Charles E. Simon, B. A., M. D.

Practical Hygiene, by Charles Harrington, M. D.; fourth edition, revised and enlarged, by Mark Wyman Richardson, M. D.

C. V. MOSBY COMPANY, St. Louis, 1911.

A Handbook of Suggestive Therapeutics, Applied Hypnotism, Psychic Science, by Henry S. Munro, M. D.

BLAKISTON'S SON & CO., Philadelphia, 1911.

A Manual of Surgery, by Francis T. Stewart, M. D.

Laboratory Studies—Tropical Medicine, by C. W. Daniels, M. B., M. R. C. P., and H. B. Newham, M. R. C. S., L. R. C. P., D. P. H., D. T. M. and H.

MISCELLANEOUS.

Hieronymus Fracastor's Syphilis. (The Philmar Company, St. Louis, 1911.)

Principles of Surgery, by Stewart McGuire, M. D. (Southern Medical Publishing Company, Baltimore, 1908.)

The Panama Canal Zone—An Epochal Event in Sanitation, by Charles Francis Adams.

Experimental Measles in the Monkey, by John F. Anderson and Joseph Goldberger. (Washington Government Printing Office, 1911.)

Sham Reciprocity: Remarks of Hon. Robert M. La Follette, of Wisconsin, in the Senate of the United States, July 13, 1911. (Washington Government Printing office, 1911.)

One Hundred Surgical Problems, by Jos. D. Mumford, M. D. (W. W. Leonard, Boston.)

Reprints.

Some Observations of the Use of Guipsine as an Oppressor Remedy in Cases of High Artificial Blood-Pressure, by O. K. Williamson, M. D., F. R. C. P.

A Preliminary Report; Etiology, Pathology and Treatment of Pellagra; A New Theory of Specific Cause, by George C. Mizell, M. D., Ph. D.

A Review of Methods of Examination in Heart and Blood-Vessel Diseases, with Special Reference to the Discovery of Therapeutic Indications, by Louis Faugeres Bishop, A. M., M. D.

A Suggestion in the Introduction of the Needle Into the Vein in Making Intravenous Injections of "606," by Edgar G. Ballenger, M. D., and O. F. Elder, M. D.

Salvarsan, or "606," Ehrlich's New Remedy for Syphilis, by Edgar G. Ballenger, M. D.

4-b-Aminoethylglyoxaline (b-Quinazolyethylamine) and the Other Active Principles of Ergot; b-Quinazolyethylamine a Depresser Constituent of Intestinal Mucosa, by G. Barger, M. A., D. Sc., and H. H. Dale, M. A., M. D.

The Synthesis of c-b-Aminoethylindole; Narcissus: An Alkaloid from the Bulb of the Common Daffodil (Narcissus Pseudonarcissus), by Arthur James Ewins, B. Sc.

Experiments on the Formation of 4 (or 5)-b-Aminoethylglyoxaline from Histidine, by Arthur James Ewins, B. Sc., and Frank Lee Pyman, D. Sc., Ph. D.

The Physiological Action of b-Quinazolyethylamine, by H. H. Dale, M. A., M. D., and P. P. Laidlaw, M. A., B. C.

The Action of Rubber on Mercurial Antiseptic Solutions, by A. T. Glenny, B. Sc., and G. S. Walpole, B. Sc.

The Action of Some Isoquinoline Derivatives, by P. P. Laidlaw, M. A., B. C.

Operation for Fractured Femur; Eleven Successful Cases, by John B. Walker, M. D.

The Eradication of Beriberi from the Philippine (Native) Scouts by Means of a Simple Change in Their Dietary, by Weston P. Chamberlain.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans
FOR JULY, 1911.

CAUSE.	White.	Colored.	Total.
Typhoid Fever.....	9	8	17
Intermittent Fever (Malarial Cachexia)	4	1	5
Smallpox.....			
Measles	1		1
Scarlet Fever.....			
Whooping Cough.....	7	4	11
Diphtheria and Croup.....	1		1
Influenza	2	1	3
Cholera Nostras.....	1		1
Pyemia and Septicemia		3	3
Tuberculosis.....	32	48	80
Cancer.....	18	3	21
Rheumatism and Gout		1	1
Diabetes	1	1	2
Alcoholism	2		2
Encephalitis and Meningitis.....	6	3	9
Locomotor Ataxia.....			
Congestion, Hemorrhage and Softening of Brain.....	18	4	22
Paralysis	1		1
Convulsions of Infants	2		2
Other Diseases of Infancy	16	5	21
Tetanus	1	2	3
Other Nervous Diseases	3		3
Heart Diseases.....	45	33	78
Bronchitis	3	1	4
Pneumonia and Broncho-Pneumonia.....	8	14	22
Other Respiratory Diseases.....	2	1	3
Ulcer of Stomach.....			
Other Diseases of the Stomach	6	7	13
Diarrhea, Dysentery and Enteritis.....	23	15	38
Hernia, Intestinal Obstruction.....	4	1	5
Cirrhosis of Liver.....	13	2	15
Other Diseases of the Liver	2	1	3
Simple Peritonitis	2		2
Appendicitis.....		1	1
Bright's Disease	23	24	47
Other Genito-Urinary Diseases.....	7	5	12
Puerperal Diseases	2	1	3
Senile Debility.....	5	3	8
Suicide	4		4
Injuries.....	22	14	36
All Other Causes.....	22	10	32
TOTAL	318	217	535

Still-born Children-- White, 19; colored, 19; total, 38.

Population of City (estimated)—White, 272,000; colored, 101,000, total, 373,000.

Death Rate per 1000 per annum for Month—White, 14.03; colored, 25.78; total, 17.21.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 30.08
Mean temperature 80.00
Total precipitation .. 8.40 inches.
Prevailing direction of wind southeast.

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No. 4

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

The Gall-Bladder and Biliary Tract an Available Therapeutic Route to the Upper Bowel.*

REMARKS ON THE McARTHUR "DRIP," AND ON "CHOLE-
CYSTODUODENAL CATHETERIZATION."

By RUDOLPH MATAS, M. D., New Orleans, La.

Every reasonable suggestion that will aid the surgeon in extricating his patient from the many perils and pitfalls which beset the thorny path to recovery, after a critical operation, is worthy of attentive consideration. The last decade has been especially prolific in new methods, procedures, and inventions that have enormously improved our postoperative results, especially when pre-existing injury or disease has crippled the vital resources of the patient long before surgery is appealed to to rescue the struggling victim.

Because of the greater frequency of the indications for operation, the diseases or injuries of the organs contained in the abdominal

* Read at the Nashville Meeting of the Southern Surgical and Gynecological Association, December, 1910.

cavity have offered the most striking example of the increasing resources which have been placed at the disposal of the surgeon in dealing with postoperative complications. It would be profitless to review, or even mention, these revolutionary contributions to the after-treatment of operative cases, as they have now become common property and are too familiar to every practical surgeon to justify an encroachment on the limited space at my command on this occasion.

THE MCARTHUR DRIP.—My purpose to-day is to engage your attention in a brief review of a procedure which has been too recently suggested to be generally known or appreciated, and which, in my limited but fruitful experience, deserves to be classed among the life-saving measures in the great emergencies which are likely to occur in a particularly dangerous group of biliary infections. I refer to the recent suggestion offered by Dr. L. L. McArthur, of Chicago, at the Atlantic City meeting of the American Medical Association, held in June, 1909, and which appeared in the transactions of the Surgical Section under the modest title, "Some Therapeutic Possibilities of Biliary Fistulæ."

In this very valuable contribution, McArthur not only proposed, but demonstrated by experience, the practicability of utilizing the gall-bladder and biliary tract as an indirect route to the duodenum and upper bowel, thus permitting the operator to furnish an abundant supply of water, medicated or nutrient fluids, to the organism at the most critical period of the struggle, when the mere drainage of septic or toxic products from the liver is insufficient to relieve the strain imposed upon the eliminating organs by the general toxemia.

In explaining the purpose, advantage, and technique of McArthur's procedure, I can do no better than to quote the language of the author (Transactions, p. 223 *et seq.*):

"In practically every case of operation for gallstones the operator establishes a temporary biliary fistula, either of the gall-bladder or of the common duct, the purpose being to relieve the cholemia, cholecystitis, or cholangitis, by continuous drainage, in much the same way that a urinary cystitis is relieved. Such treatment has proved to be the most efficient yet devised. To hasten the cure, some have added to this simple drainage a daily lavage of the gall-bladder with an alkaline, mildly antiseptic solution. The loss of much of

the fluid used for an irrigation, frequently observed during such a lavage, naturally suggested the idea of studying the effects of various fluids introduced into the duodenum. So striking have some of these been, that I desire to call attention to them, as well as to urge their further study by surgeons. First, as a means of deluging the system with water, the temporary fistula can be utilized with surprising advantage. I have repeatedly injected such cases by a continuous irrigation of a warm sterile normal salt solution, 500, 1,000, 3,000 c. c. of fluid, first, as an experimental observation, then as a means of flushing out the kidneys, or clearing up jaundice, or filling up the blood-vessels, and, in one case, even added dextrose as supplying the food calories most easily assimilable.

“Technique: In every gall-bladder drainage a tube is inserted and is held in place by absorbable purse-string sutures, the latter inverting the gall-bladder wall in such a way that, when the tube is withdrawn, peritoneal surfaces come in contact and the fistula heals. These purse-string sutures make the closure of the gall-bladder around the drain practically hermetic for the first few days. To provide, however, against accidental leakage into the abdomen, some temporary protective drain, such as Bullitt, of Louisville, devised, is employed for added safety. If now, with such a tube, through which the bile has been flowing, thus demonstrating the duct as patulous, we connect the tube of an irrigator containing, for example, normal salt solution, the rate of flow being graduated not to exceed five to six drops to a second, and the pressure to be not more than 20 inches elevation, continuous flow into the duodenum can be established and maintained without discomfort to the patient. Too rapid flow, or too high pressure, will quickly produce pain, simulating mild biliary colic, and might deter one from using this procedure if not cognizant of these facts.

“When large quantities of fluids have been thus introduced there has been observed a slowing of the pulse with a filling out of the vessels, a loss of thirst, a moistening of the tongue and skin, a surprisingly rapid increase in the urinary output (patients complaining of the frequency of the urination), and even edema of the feet in a patient lying on an inclined bed.

“In case of the gall-bladder drainage the patulous condition of the cystic duct can be determined after the insertion of the drainage

tube before closure of the abdomen, by the use of a small glass syringe filled with sterile salt solution. When I have had to utilize common duct drainage, I have never tried this procedure until the second or third day, by which time, if leakage occur, it finds itself confined to the space walled off by the prophylactic gauze inserted for such emergency, and escapes externally."

Indications: The indications for the cholecystoduodenal drip, if we might so designate McArthur's procedure, are obvious in many cases, and will suggest themselves spontaneously to the mind of the experienced surgeon. As shown by McArthur, it is especially indicated in the cases of chronic obstructive jaundice associated with nephritis, probably incident to the toxic effects of cholemia. "In just such conditions, especially after an ether anesthesia (which, by the way, should now be always discarded for a gas and oxygen combination), there is constant danger of urinary suppression. Under these conditions I have sometimes found it possible to start promptly an active secretion of urine, thus minimizing the patient's danger." Postoperative anuria ending in fatal coma is a well-known danger in chronic obstructive jaundice. The frequent association of parenchymatous degeneration of the kidneys with chronic hepatic disease was long ago pointed out by Frerichs and, since his day, by von Leyden, Nothnagel, Moebius, Chauffard, Hanot, and many others. The gravity and pathology of the hepatogenic anuria as a postoperative complication has been well shown by Clairmont and von Haberer in a recent essay, which is well worthy of consultation by all those interested in the subject.

It was the result obtained in just such a case (to be detailed subsequently) in which the suppressed urinary function was promptly restored and life saved by the timely application of McArthur's procedure, modified by the direct infusion of fluids through a catheter introduced into the duodenum via the gall-bladder and common duct, that made me a convinced believer in the practical value and in the far-reaching possibilities of the upper duodenal route.

Apart from renal complications, chronic jaundice caused by any form of biliary obstruction will be dissipated and relieved more promptly by a cholecystoduodenal drip than when simple drainage alone is used. Moreover, I believe, with McArthur, that persistent postoperative biliary vomiting is more quickly controlled by flush-

ing the duodenum with an alkaline salt solution (Vichy water in my case) than by any other method.

The effect of duodenal infusion in arresting the incessant and exhausting postoperative vomiting was most noticeable in my first case, in which this was one of the most distressing symptoms. I can account for its prompt action only by the supposition that the introduction of fluid into the duodenum and upper bowel in a steady stream starts an active peristaltic wave downward toward the jejunum, which tends to keep the stomach empty and free from bile and pancreatic secretion. Sometimes the fluid appears in the vomitus, thus washing out the stomach, but by the method of direct infusion with a catheter in the duodenum, which I have practised, as will be explained later, the tendency of the fluid is always to flow downward rather than upward.

The most noticeable effect, however, is the stimulation of renal secretion and the great increase in the urinary output which follows after the irrigation has begun. The steady flow of fluid into the upper bowel increases the fluidity of the intestinal contents, washing the bowel and favoring peristalsis with the expulsion of gases, which are an especially annoying feature in old jaundice subjects. The filling of the bloodvessels and increased blood pressure is certainly a prompt and most gratifying feature of the procedure in exhausted and debilitated subjects.

The method again can be utilized to great advantage in introducing nauseating medicated solutions, as in hemorrhagic cases in which gelatin and the calcium salts are indicated. This is especially true when the oral and rectal avenues for their introduction are barred by vomiting or rectal irritability. Again, my experience tallies with that of McArthur in the value of the cholecystoduodenal route as an effective avenue for the administration of soluble food and nutrient fluids of all kinds.

Direct Duodenal Infusion, or Enteroclysis Through a Catheter Inserted Into the Duodenum via the Gall-bladder and Common Duct (Cholecystoduodenal Catheterization): It is quite evident that there are cases and conditions which make it difficult or impossible to instil or infuse fluids into the duodenum by the simple "drip" method of McArthur, and that, in order to reach its destination in the intestine, a catheter or drain of some kind is necessary to carry the fluid either into the common duct or into the intestine beyond the papilla of Vater.

This is true of all cases in which the cystic or common ducts are obstructed. The discharge of bile through the fistula in the gall-bladder is sufficient evidence, as a rule, that the cystic duct is pervious, and in all such cases the simple drip method of McArthur is applicable; but when the cystic and common ducts are obstructed by gallstones, strictures, inflammatory or neoplastic infiltrations, etc., then the operation cannot be terminated successfully unless the obstruction is removed and the bile current is re-established in its normal channels, or by establishing new avenues for the escape of the retained secretions. With the exception of the procedure of cholecysto-enterostomy, all cases of obstruction of the cysticus or choledochus require drainage; and when this is the case a form of permanent catheterization "*à demeure*," as the French term it, of the biliary tracts is established, through which the duodenal infusion may be readily administered if required by the postoperative developments of the case. In cases requiring cholecystectomy with choledochus drainage, duodenal infusion may be resorted to if a T-tube of soft rubber is used as a drain, with the tube held in place by catgut suture to prevent leakage. In cases in which the obstruction exists at the cystic duct after opening and emptying it, it will suffice to split its inferior wall through the stricture, dividing the cystic duct to the choledochus (Delagenière's procedure). It is then easy to introduce a soft rubber catheter of appropriate size into the common duct directed toward the duodenum. The remnants of the cystic duct and gall-bladder are utilized as a sheath, which is sutured over the catheter, in this way effectively preventing the leakage of bile and of other fluids should infusion be required. In all obstructive cases showing white clay stools, it is important, after the removal of calculi or other apparent obstructions, to test the permeability not only of the cystic and common ducts, but also of the papilla of Vater, in order to make sure that the normal bile current will be certainly restored. In these cases a soft rubber Nélaton catheter or a flexible lead probe, or a whalebone guide, or, better, perhaps, than all, a ureteral catheter, should be used as a probe, which should go through the papilla of Vater freely. If there is a marked tendency to contraction of the duodenal orifice of the duct, the catheter should remain in the choledochus, projecting freely into the intestine. A direct continuity of the tubular tract is thus established from the external

wound or fistula in the gall-bladder into the duodenum. When the duodenal opening is free and patulous, the drain or catheter may be left in the duct only, in the usual way, the tip of the catheter being directed toward the duodenum and not toward the hepaticus or liver. While the directions may be at variance with the practice of other surgeons, I fail to see any advantage in common duct drainage in pointing the catheter in the direction of the hepaticus instead of the duodenum as long as the gall-bladder or cystic duct remains *in situ*. When the gall-bladder must be sacrificed, it is then easy to understand that the "fish-tail" tube of the Mayo's or the T-tube of Kehr, properly anchored in the common duct, will more securely serve the purpose of drainage than an ordinary catheter drain.

It is understood that not every case of obstructive jaundice calls for duodenal infusion; probably the great majority of cases do not; but I contend that in all the more chronic toxic or septic cases the operator should bear in mind the great value of duodenal infusion, and adapt his method of biliary drainage in such way that the drain can be utilized for infusion if the indications for its application should arise in the after-treatment.

The catheterization of the biliary tracts for the purpose of supplying water or other fluids to the organism in a great toxic crisis is a new procedure; but, as a purely technical performance, it is an old expedient which was far more familiar to the surgeons of the older generation and to the pioneers in hepatic surgery than it is to the better-trained and bolder men of the present day.

Historical Data: For this reason it may be instructive to dwell for a few moments on the history of this almost forgotten and obsolete procedure. As defined in the older texts, the catheterization of the biliary passages is a term applied to any procedure which aims at the exploration of the bile tracts with either hollow or solid sounds (bougies or catheters). In order to enter into the terms of this definition, the exploring instrument must penetrate by the anatomical routes of the bile current, either through the gall-bladder via the cystic or common duct to the duodenum (retrograde catheterization), or through the duodenum via the papilla of Vater and common duct to the gall-bladder (direct duodenal catheterization, also known as McBurney's procedure. According to the conscientious bibliographic researches of Terrier

and Dally, the first record of a successful catheterization of the biliary passages goes back to 1743, when Jean Louis Petit, the famous secretary of the Société de Chirurgie de Paris, published the observations of his unique case. Petit advocated the exploration of the gall-bladder for calculi by sounding with bougies or probes which would reveal their presence. He opposed the method of simple tapping of the gall-bladder, when this was distended and adherent to the abdominal wall, as was the custom in those days. He believed that the gall-bladder should be treated like the urinary bladder, and the exploration and removal of biliary calculi should be conducted on the same principles that guided the surgeon in removing urinary concretions. He recommended the operation of "cholecystendysis," or incision of the gall-bladder, instead of the trocar puncture. In a case of spontaneously formed fistula of the gall-bladder, Petit enlarged the fistulous opening in the skin and introduced a curved sound, which penetrated so deeply that he was confident it had passed the cystic duct and into the choledochus. He was not able to reach the duodenum, because the patient could not tolerate the pain of instrumentation. After this primitive and abortive effort, which was aimed solely at clearing of the gall-bladder and ducts from obstructing calculi, nothing was written on this subject from 1743 to 1885, when Charles T. Parkes, of Chicago, reported the second observation of catheterization (July, 1885), in which he cured a chronic fistula of the gall-bladder by cutting down into this organ, removing a mass of calculus, and then introducing a steel sound No. 11, which penetrated all the way into the duodenum. This appeared to dilate the cystic and the common ducts, and the fistula closed.

Other observations and essays on the subject of catheterization of the biliary passages soon followed, prominent among which are those of Rose and Meredith (1884), Willet (1886), Kappeler and Ohage and Zagorski (1887), Winiwarter, Torrance, Kroenlein, Courvoisier (1888), Gersuny (1889), Fontan (1889), Faure (1889), and others who gave special emphasis to the systematic and methodical exploration of the bile passages. Probably the most notable and thorough essays on the instrumental exploration of the biliary passages were the contributions of E. Rose (1890), and, above all, the masterly and comprehensive monograph which reviews all the previous publications by Terrier and Dally which

appeared in the *Revue de Chirurgie* of 1891-1892. Shortly after these important contributions we may note, among others, the observations of Calot (1890), H. Delagenière, of Mans, and of Fontan, (1891), Morris (London, 1895), and especially of Charles McBurney, who is credited with the first catheterization of the common duct by the transduodenal or normal route. In latter years the catheterization of the biliary tracts has been made the subject of systematic discussion in the larger monographs and treatises on hepatic surgery which have appeared in Europe, such as Langenbuch (1894), Pantaloni and Marcel Baudoin (1899), Kôre (1909), Faure and Labey (1910). In these and other works the reader will find illuminating information on a subject which, in spite of the first interest which attached to it, in the pioneer days of hepatic surgery, has become, at the present time, almost historical and of comparatively little practical interest. It is only now that the suggestion offered by McArthur has invested what was an almost obsolete technical procedure with an entirely new interest, that the subject justifies a revival in a greatly modified light.

The object usually sought by the operator in exploring the biliary passages by sounding or catheterizing them was to cure persistent biliary fistula after operations for gallstones, or for the drainage of the bile tracts. These fistulæ remaining in consequence of defective technique (*i. e.*, suturing the mucosa of the gall-bladder to the skin) or because of obstructions in the cystic and common ducts by impacted stones, strictures, inflammatory swellings, and neoplasms, which impeded the restoration of the flow of bile and of the secretions in the normal channel.

Sounds and catheters may thus be used for (*a*) exploratory, and (*b*) for therapeutic purposes. The results obtained by these procedures may be summed up into: (1) Exploration and dilatation of the ducts for the extraction of calculi. (2) Systematic dilatation for stricture. (3) Dilatation with fluids and air (Weller van Hook) for purely diagnostic purposes. (4) The injection of water and medicated solutions, including oil and glycerin, to promote the solution and expulsion of impacted calculi. (5) The injection of antiseptic solutions to disinfect and modify chronic infections in the gall-bladder and bile passages (Baudoin).

The indications above summarized cover practically all the con-

ditions which in the past called for the instrumental exploration and catheterization of the bile passages, with the exception, perhaps, of drainage, which is always separately considered in the classic treatises.

The reasons for the gradual abandonment of the instrumental exploration and catheterization of the biliary tracts are quite evident when we regard this procedure in the light of the older surgery of the gall-bladder and bile passages, when the technique was defective and the methods of exposing the field of operation in the inferior surface of the liver were inadequate. The surgery of the choledochus and hepaticus was unknown, and these ducts were practically inaccessible to the direct intervention of the surgeon. It is quite natural that any suggestion that would offer a prospect of clearing the biliary tract of any obstruction to the flow of bile should be grasped eagerly and developed to its fullest possibility. The need for these tentative, "groping in the dark" methods no longer exists in operative cases, not only because we can explore *de visu* or by combined intra- and extracanalicular manipulations, and thus ascertain the difficulties in the way of normal bile drainage, but also because the one great reason for retrograde catheterization in the past—persistent biliary fistula after cholecystotomy—is rapidly disappearing.

In addition to these diminishing indications for catheterization, caused, as above stated, by the improvements in the technique, there are inherent difficulties in the practice of catheterization due to anatomical obstacles which have also contributed to its downfall and loss of prestige. As every student of anatomy knows, the normal cystic duct is guarded by Heister's valves, formed by the crescentic infolding of the mucosa, which offer a serious obstacle to the passage of an instrument into the common duct. In addition, the anomalies of implantation of the cystic duct into the gall-bladder and the tortuous twists and curves of this duct before it joins the choledochus have been made familiar by the laborious investigations of the surgeons and anatomists in recent years who have studied the anatomy of the biliary passages solely from the surgical point of view, and require no detailed consideration. Suffice it to mention in this connection the careful studies of E. Rose, Courvoisier, Terrier and Dally, Faure, Delbet, Hartmann, Hendrickson, Ernest Ruge, and the latest paper of Hans Kunze

(1911), to prove that every anatomical feature of surgical value in connection with the normal and abnormal anatomy of the gall-bladder and bile ducts has been investigated, and that all the evidence in our possession simply confirms the conclusions already familiar to every experienced surgeon, that the normal bile tracts are subject to many anomalies and numerous variations which would make it impracticable to establish any fixed or definite rules for the catheterization of the cystic and common ducts by the gall-bladder route. There is no question, however, that the introduction of catheters or sounds into the duodenum through the cystic and common ducts is a much more feasible procedure in pathological than in normal conditions, especially when the gall-bladder and ducts are dilated by prolonged bile stasis caused by obstructions in the common or cystic ducts. In many cases, in consequence of bends or twists in the cystic, or because of the persistence of the valves of Heister, or because the duct opens into the gall-bladder laterally and not terminally, the introduction of the catheter becomes quite difficult even in pathological cases. In practice it has been found that the instrument can often be introduced into the duodenum, past the cystic duct, with surprising ease, while in others insurmountable difficulties will be encountered which will make the procedure impossible in spite of the most persevering efforts. The catheterization of the cystic duct is, therefore, at best an uncertain procedure. These were the conclusions which Terrier and Dally arrived at in 1891, and they hold just as true to-day; but these are true in so far only as they apply to cases in which the attempt to catheterize is made through a fistula or opening in the gall-bladder already anchored and fixed to the abdomen, and not in the class of cases which we now have under consideration, or for the purpose that we have in view. However, it should be remembered that in a large percentage of cases the cystic and common ducts are permeable to catheters, especially to ureteral catheters, when introduced through a surgical fistula in the gall-bladder, and this can serve a very good purpose in many cases of persistent biliary fistula, as it has been my good fortune to demonstrate in several cases which have come under my observation in recent years.

In the earlier days of my surgical practice I was very timid of handling the gall-bladder, and much more so the common duct

(not that my respect for it has grown less), and in consequence I did as little meddling as was compatible with the main purpose of my operation, which was to open, evacuate, and drain the gall-bladder. In consequence, the operations were often imperfect, and some stones remained impacted in the cystic or common duct which I attempted to break up or crush by subsequent intravesical manipulations, more especially by washing out the calculi by frequent irrigations of the gall-bladder with mild antiseptic solutions. I found that hydrogen peroxide did far better than any other agent, because, with the evolution of gas, the calculi were detached from each other and from the adherent gall-bladder. I also learned to probe and catheterize the cystic and common ducts in order to remove obstructions in the way of the re-establishment of the normal bile current, and in this way got rid of several persistent biliary fistulæ, which were so much more common then (1880 to 1890) than now. But it never occurred to me to test the value of the bile duct route as a means of relieving a water famine in the organism, and thus supplying the best means of supporting and stimulating the circulation, until I had read McArthur's suggestion. In fact, I had already forgotten much of what I had once learned of catheterizing the bile tracts when the possibility of utilizing a catheter already acting as a drain in the common duct as a simple means of applying the McArthur drip for duodenal enteroclysis made me realize all the value of the almost forgotten method of biliary catheterization when applied in appropriate cases and in proper conditions.

The patient in this instance was a woman of Cuban birth, aged thirty-five years, who had suffered from chronic cholecystitis for nine years, complicated by a chronic appendicitis. At the operation a typically small, shrivelled gall-bladder was dissected out of a mass of omental and intestinal adhesions and drained. The appendix, which was also universally adherent and diseased, was removed. By splitting the cystic duct a rubber catheter drain, No. 7, English, was left in the common duct; the relic of the gall-bladder, sewed up, was left as a sheath to the drain. The operation under ether narcosis was tedious and laborious. The immediate postoperative sequelæ were of little significance. On the second day all the signs of an impending anuria developed; only nine ounces of urine were passed in twenty-four hours, and this was

dark greenish black, stained with bile pigment and blood, showing a specific gravity of 1.035, 25 per cent. albumin, and an immense mass of casts and epithelial debris. The urine toward the middle of the third day was being voided at long intervals in quantities not exceeding one ounce. The patient vomited incessantly. The rectum was exceedingly irritable on account of the inflamed piles, and the Murphy drip, which was given with difficulty, was rejected or remained unabsorbed. The facies had become pinched and haggard; a marked icteroid tinge spread over the skin; the bile drainage was scant; the abdomen was tympanitic; the pulse was losing volume and steadily rising from 110 to 140; the temperature was low. Gastric lavage repeatedly applied relieved the vomiting only for a short time. In the presence of this ominous and forbidding situation, I fortunately thought of the easy route offered by the rubber drain which was ready for duty in the common duct. I at once began to work with it, so that with scarcely any effort I felt it slip through the papilla of Vater into the duodenum. At 11:30 A. M., August 3, I had injected 200 c. c. of warm salt solution, utilizing the barrel of a two-ounce glass syringe as a funnel. The vomiting began to abate at once, and none of the fluid was returned by mouth. From 11:30 A. M. to 7 P. M. 960 c. c. of tepid sterile water were injected into the duodenum in doses varying from 150 to 200 c. c., to which I had added five grains of diuretin to the dose. In the same length of time the patient had voided $27\frac{1}{2}$ ounces of clearer and less albuminous urine. The improvement in the nausea and vomiting was remarkable. The bowels moved with copious discharge of flatus in response to the rectal flushes which previously had failed to act. During the night of August 3 the patient received 1,170 c. c. (over 1 quart and 5 ounces) of warm Vichy water injected by the bile duct route, and passed $42\frac{1}{2}$ ounces of urine, specific gravity, 1.019, with only a trace of albumin and almost total disappearance of bile pigment and blood. The biliary route was utilized in the same way systematically until August 25, when the catheter was removed to allow the wound to close. During this period diuretin, panopepton, strychnin, castor oil, Carlsbad water, and Hunyadi Janos in purgative doses were administered directly into the duodenum by the biliary route, much to the satisfaction of the patient, who was easily nauseated by even the sight of unpalatable drugs. The patient is now perfectly well and has gained steadily in flesh.

The experience which I have related is, I believe, a conclusive demonstration of the great value of the McArthur principle. On September 26, 1910, I had another opportunity to resort to direct infusion of the duodenum through a catheter introduced in the common duct. The patient, a man, aged forty years, was brought to me from Leland, Mississippi, suffering with a ruptured and gangrenous gall-bladder. A pericystic and subhepatic abscess had formed, and there was also an associate pancreatitis. The abscess, which was circumscribed by adhesions, was drained, the gall-bladder extirpated with a number of free calculi, and a drain was left in the common duct. The drainage of the common duct was especially difficult on account of the universal adhesions. The patient stopped breathing in the course of the operation, and in addition to artificial respiration he had to be infused intravenously to restore him from a complete collapse. He rallied, however, and all seemed well until the third day, when the signs of a progressive pulmonary infarct and septic hyperpyrexia suddenly developed and the patient succumbed on the afternoon of the fifth day. In this case a duodenal infusion through the catheter left as a drain through the common duct was not begun until the fifth day, seven hours before death, when the dyspnea, cyanosis, hemorrhagic vomit, fluttering pulse, rising temperature, and capillary stasis made it quite evident that dissolution was near, and that all efforts at treatment would be fruitless. No attempt had been made to utilize the duodenal route before this, as the patient retained food by mouth without difficulty, and also absorbed the Murphy drip, which had been applied almost continuously. He also urinated freely without evidence of renal incompetency. Coffee, champagne, panopepton, and adrenalin were administered, diluted in plain water, directly into the duodenum through the drain which had been left in the common duct, but all to no avail, as can be readily understood from the nature of the case.

I have also resorted to catheterization of the biliary tract in four cases of biliary fistula. In one, a single catheterization with a large ureteral catheter pushed into the duodenum was sufficient to cure the fistula. This patient, an Italian woman, who had worried with the fistula over one month, recovered completely after allowing the catheter to remain *in situ* forty-eight hours. A cholecystostomy had been performed for multiple biliary calculi; over

sixty-eight large and small stones were removed at the time of the operation, several of which were impacted in the cystic duct. It is possible that some fragments or debris of calculi were still lodged in the cystic or common duct, and that these were displaced by the catheter and the dilating effect of this instrument.¹

In another case of biliary fistula following a cholecystostomy for multiple calculi and cholecystitis, referred to me by another surgeon, I succeeded in passing a flexible ureteral bougie, after irrigating the gall-bladder with adrenalin-cocain solution (Schleich No. 1 + 10 minims of adrenalin solution). The bougie was followed by a ureteral catheter, and the fact that it had penetrated freely into the duodenum was established by the disappearance of several ounces of sterile saline solution injected through the glass barrel of a syringe attached to the catheter as a funnel. In this case the catheter was allowed to remain a week in position; after its removal the fistula closed and the patient recovered completely.

In a third case, a woman, aged fifty-four years, operated in a neighboring town in Louisiana, retained a fistula which alternately discharged bile and muco-pus. Several calculi had been removed from the gall-bladder at the time of operation, but the wound had never completely closed. She had been in this condition over six weeks. The fistula had apparently cured twice, but each time that this happened a painful swelling developed in the scar, which was followed by rigors and fever. On one occasion the scar yielded spontaneously, and a profuse discharge of septic bile followed, with immediate relief of the symptoms. Again the fistula closed, and the signs of cystic retention compelled an incision, which reopened the gall-bladder. When she came to me the patient was wearing a drain. I enlarged the fistula by incision, under local anesthesia, sufficiently to allow me to introduce my index finger. I thought I could detect a small hard body at the bottom of the gall-bladder, which was itself very long and narrow. I then irrigated the cavity freely with a eucain-adrenalin solution, and after working with a long, soft leaden probe and dull curette, succeeded in mobilizing a calculus which was washed out in fragments. Following this, I introduced a ureteral catheter until it had disappeared two feet beyond the surface of the skin, and made

¹ This patient has been seen several times since the reading of this paper in December, and the fistula has remained closed, the patient reporting herself perfectly well.

sure it was not coiled and that it was lying in the duodenum by injecting several ounces of plain water, which promptly disappeared in the intestine. The catheter was allowed to remain *in situ* for two days, and was then removed. Bile flowed in considerable quantity for two days, and the fistula then closed rapidly. The patient returned to her home in the country perfectly well ten days after the fistula had healed. She has never complained since.

The fourth case is the most instructive. A farmer from Mississippi, aged forty-nine years, had been operated twice for gallstones in a neighboring city. The first time his gall-bladder was drained and several calculi were removed. The wound closed, but he developed a secondary retention, followed by chills and fever, and another surgeon removed his gall-bladder, or at least a part of it. Several weeks elapsed, and the patient returned home with an unhealed fistula, from which the bile flowed freely. Whenever the fistula contracted sufficiently to obstruct the flow of bile, severe chills and fever immediately followed. He then consulted me at the Touro Infirmary. He was quite weak and emaciated from protracted fever and sepsis. His stools were pale from lack of bile, and he was slightly jaundiced. I began by dilating the fistula, and found that the opening led to a narrow pocket lined by mucous membrane, which admitted half the length of the index finger. The pocket was then freely irrigated with Schleich-adrenalin solution, followed by hydrogen peroxid, and an effort to detect an impacted stone was made, but no calculus was found. I then introduced a Kelly cystoscope of large caliber with an attached light, and by searching carefully I recognized two distinct openings at the bottom of the pocket.

I then introduced a ureteral catheter into one of these, but failed to advance farther than an inch in that direction. I tried the maneuver on the other opening, and was gratified to find that the catheter disappeared easily, its full length, into the duodenum. That the catheter was in the duodenum was easily proved by the rapid disappearance of half a pint of water, which was allowed to trickle into the catheter through a narrow funnel. I allowed the catheter to remain *in situ*, with two feet of its length lying within the gut. The patient expressed no discomfort, and I allowed the catheter to remain undisturbed for three days. In the meantime the patient expressed himself as unusually well; the

appetite returned, and the stools promptly assumed a normal brown color. The fever completely subsided. No bile escaped externally. Evidently the normal flow of bile had been restored. I thought the obstruction, whatever had been its nature, had been overcome and that the trouble was over. The catheter was removed. Nothing occurred except that bile appeared externally the following night, and after this the fever and chill returned. It was evident that the obstruction had recurred and that the flow of bile in the common duct was again interfered with on the removal of the catheter. I at once reintroduced the catheter without serious difficulty, and the patient was once more comfortable. No fever, no chills; good appetite and normal stools so long as the catheter remained *in situ*. He remained in the Infirmary under observation for one week, during which he gained rapidly in flesh and his complexion cleared up completely. I was preparing to remove the catheter a second time, when the patient decided that he must return home at once, and suggested that I supply him with an extra catheter in case the first one I had placed should wear out before he could return. I removed the catheter, and with the greatest ease replaced it by a new one, and I allowed him to go home. I received a letter from him two weeks after, stating that he was feeling so well and had gained so much in flesh that he felt perfectly safe with the catheter, and, if I saw no objection, he would prefer to remain home for a month or more to attend to his farm, which sadly needed his presence. In the meantime, he and his wife had been experimenting with the catheter, and, as he informed me subsequently, she had learned how to pass the catheter herself, she had no difficulty in passing a new one when the old one showed signs of erosion by the action of the intestinal juices. He has written me several times since, stating that the ureteral catheters wear out, as they are digested and partially dissolved by the action of the intestinal juices, so that they soon lose all their firmness in about two weeks. He is regularly supplied with Porges' French ureteral catheters No. 5 or 6, by a local dealer. Thus far he has decided to continue wearing the catheter rather than take the chances of another operation.¹

¹ As this paper is going to the printer five months have elapsed, and this patient is still wearing his catheter with seemingly no ill effects. He has written me several times, stating that, apart from the inconvenience of wearing this instrument, which he holds in place with a light dressing and

I have dwelt at considerable length on the history of this case because of its instructive features, and chiefly because, taken together with the cases previously related, it proves conclusively that the fear of an ascending infection spreading from the duodenum to the ducts and causing a septic cholangitis is unfounded, or at least is not likely to occur so long as there is no bile stasis and so long as the normal flow of bile through the choledochus is thoroughly established. These experiences also prove conclusively that a catheter may remain almost indefinitely in the bile tract and in the upper bowel without causing any appreciable disturbance and with perfect toleration.

CONCLUSIONS.—From my limited but very satisfactory experience since last August (1910), I am inclined to prefer the infusion of fluids directly into the duodenum through a catheter whenever this is possible or practicable, rather than inject the gall-bladder so that the fluid may find its way to the bowel by the ducts. For this purpose I have found nothing so effective as a ureteral catheter of the largest sizes (No. 4 and 5 Porges), which is allowed to penetrate into the bowel for one-quarter or one-third its length. In cases in which the catheter can be introduced, it is the method to be preferred. It can be readily conceived that there are cases, and many of them, in which catheterization is not practicable after the abdominal wound has been closed. In such cases the slow instillation of fluids through a drain introduced in the gall-bladder in the cautious manner recommended by McArthur is the proper procedure, provided the presence of bile in the drain demonstrates the patulous condition of the cystic duct. In this way the Mc-

a belt, he is perfectly well and is able to attend to his duties on the farm with as much satisfaction and regularity as he did when he was well. No bile flows from the fistula, which is barely large enough to admit the ureteral catheter. He expects to return to the Infirmary some day to undergo an operation, if necessary, which will relieve him of the catheter and of the fistula. I have not been able to explain the mechanism of the obstruction in this case except by supposing that an angular bend or valve has formed at the junction of the hepatic and common ducts as a result of traction on the stump of the gall-bladder when the operator attempted to anchor or suture this through the abdominal wall at the time when the partial cholecystectomy was performed. The angle or bend which partially interferes with the flow of bile in the choledochus is probably effaced by the catheter *in situ*. If this condition is not ultimately corrected by the persistent use of the catheter, the only solution to the problem will be to release the stump of the gall bladder from its present attachment to the abdominal wall, thus allowing it to drop back to its normal position without tension, the cystic stump being closed by ligature

Arthur procedure as applied directly to the duodenum becomes the analogue of the "Murphy drip" as applied to the lower rectum.

The advantages of direct catheterization over the simple instillation of fluid in the gall-bladder are the avoidance of pain from overdistension and the greater certainty of injecting the desired amount of fluid into the bowel at a given time. My experience only emphasizes the value of the underlying principle that McArthur has taught us. My technique has differed a little from his, but the fundamental facts which he has so ably established and advocated remain unaltered. It is quite evident that theoretical objections will be raised by many who have not had an opportunity to test the method or who may meet with exceptional conditions which may render the method inapplicable. The fear of infection of the bile tract by the contact of the catheter with the duodenal contents is amply disproved by the experiences related in this paper. We may safely leave to time and further experience the test of the true value and legitimate place of this procedure in our operative therapy. One fact will remain undisputed, viz., that nowhere is absorption so active or so normal as in the upper duodenum. Whoever has had occasion to test the efficiency of the upper as compared to the lower (rectal) route as an avenue to the circulation must be convinced that this, in a physiological sense, is infinitely more efficient and preferable, whenever it can be made available for the purposes of the surgeon.

Finally, my chief aim in this communication is to encourage others in the application of this valuable suggestion in the cases in which it is especially indicated. It is an added means of accomplishing an end when for one reason or another, in a case of cholecystostomy or choledochotomy, the means already at hand (ingestion per os, proctoclysis, hypodermoclysis, etc.) cannot be employed or are insufficient to relieve a serious or menacing situation.

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Syphilis of the Liver.*

By C. L. ESHLEMAN, M. D., New Orleans.

Syphilitic disease of the liver is more common than is generally supposed. It is seen in children (*a*) as an hereditary manifestation, and (*b*) in adults, after acquired syphilis.

The hereditary form seen in children I shall not discuss at any length, other than to mention the fact that the lesions are generally a diffuse hepatitis, with enlargement of the organ; sometimes miliary gummata scattered throughout. The condition may show itself as early as the sixth month of fetal life, or as late as several weeks or months after birth. The mortality is high in this form, the child dying shortly after birth or may be still-born. Often the lesions are associated with pronounced evidences of hereditary syphilis in other portions of the body, such as the bones, skin, spleen, or perhaps the placenta; the liver involvement, in other words, being simply part of a generalized hereditary syphilis.

Delayed congenital syphilis is another form. Here the condition appears in early childhood. There is great enlargement of the liver in an undeveloped child, with Hutchinson teeth and syphilitic facies.

In the acquired form seen in the adult we find rather different conditions. The hepatic lesion seen here may be the only mani-

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festation of the disease. It is not nearly so fatal as in the congenital type.

If we choose to divide syphilis into primary, secondary and tertiary stages, a division which some are not inclined to adopt, syphilis of the liver is oftenest found in the tertiary stage. It appears about the same time as gummata in the bone, skin, mucous membranes and meninges; in general, therefore, it is encountered several years after infection. While jaundice, fever and enlarged liver have been associated with secondary skin eruptions, and even acute yellow atrophy has been considered a secondary syphilitic toxemia, these conditions are exceptions, and hepatic syphilis is oftenest seen four to fifteen or twenty years after infection.

In the adult, several forms of syphilis of the liver are met with, namely, gummata, scars, and diffuse syphilitic cirrhosis.

(1) Gummata are the commonest. They vary in size from a pea to a large grapefruit, are pale yellowish or gray in appearance, and made up of a dry cheese-like material in the center surrounded by a fibrous zone—a sort of capsule of connective tissue. Outside of this the advancing infiltrating process gradually loses itself in the liver tissue. The cheese-like material may be pulpy and soft, or nearly as hard as mortar.

(2) Scars are usually considered to be healing fibrosing gumma, and their chief interest is in the remarkable extent to which they can deform the liver by their contraction. Sometimes small and linear or star-shaped, they are of no consequence. When numerous and large, however, they exist as bands of fibrous tissue, which divide the liver into small sections, entirely altering the usual shape of the organ. Sometimes gummata are present with the scars. This is the so-called botryoid liver of syphilis. Its nodular form especially suggests cancer, and mistakes in diagnosis are not uncommon.

(3) Diffuse syphilitic inflammation, affecting the intestinal tissue, not readily distinguished from ordinary cirrhosis. Such a condition, while not as common as the gummatous form, I have seen several cases of in the past few years. The organ is uniformly enlarged with irregular surface. Nodules, such as occur in cancer, are rare, although small gummata on the surface, sometimes combined with this form, may suggest nodulation. With this form, ascites and other evidence of portal obstruction may occur.

The clinical picture of syphilis of the liver is protean. A large, circumscribed gumma, with pulpy contents, may simulate an abscess, especially if there is fever. A number of smaller, but hard growths on the surface, with great enlargement of the liver, would strongly indicate cancer. The scarred botryoid liver also simulates cancer. The diffuse syphilitic cirrhosis, without palpable gummatous nodules, simulates either the hypertrophic cirrhosis of Hanot, or, if recurring ascites and other signs of partial obstruction are present, the condition is hard to differentiate from the first stage of ordinary alcoholic cirrhosis when the liver is enlarged.

Amyloid change in liver, spleen, kidneys and intestines may occur during the course of syphilis of the liver.

In so far as diagnosis is concerned, evidence of syphilis in other parts of the body is of great value. In differentiating from abscess, the leucocyte count and the manifestation of sepsis are to be considered. The operating needle may be necessary.

SYPHILIS.

Occurs at any age.
Often associated with other evidences of the disease.

Anemia, but no distinct cachexia.
Pain moderate, if at all.
Jaundice and ascites quite common.
Palpation usually shows irregularities on surface.
Duration may be years, followed by recovery.

CANCER.

Usually after forty years.
Rarely primary on liver, but frequently evidence of primary growth on uterus, breast, pylorus or intestine.
Cachexia very marked.
Pain often very severe.
Jaundice and ascites rare.

Usually a hard, distinct nodular condition.
Duration less than a year; rapid growth always fatal.

The cases of diffuse syphilitic cirrhosis with ascites are almost impossible to differentiate from ordinary alcoholic cirrhosis. The cases of reported cure in alcoholic cirrhosis must have been of the syphilitic type. A case of cirrhosis with evidence of syphilis in other parts of the body should be given mercurial treatment.

Likewise, no case considered cancer of the liver should ever be allowed to pass without a trial of anti-syphilitic remedies. They can do no harm, and cases have been cured.

In conclusion, I should like to emphasize several points in regard to syphilis of the liver, upon which stress has been laid by Osler in some of his numerous writings:

1. The frequency.

2. The tumor formations in connection with it.
3. Its curability in many cases.
4. The importance of differentiating the diffuse syphilitic cirrhosis from the alcoholic form, so that proper treatment may be instituted.

The case which I have here to-night presents the following history:

C. H., mulatto negro, 29 years old, horseshoer by occupation. Father died eight months ago at the age of 56 years; cause not known. Mother in good health. Never any brothers or sisters.

Patient claims to have had no serious illness up to present time. Had sore on penis eight or nine years ago, lasting five to six weeks. The small scar of the lesion is still present. No history of secondaries.

First seen the latter part of June. Claims that belly has been swelling since over a year ago, at which time it seemed to subside, but always recurred. Was able to continue work until three weeks before he was first seen. Has lost a good deal of weight in the last three months, and is now complaining of weakness and dyspnea on exertion, and fever at times.

PHYSICAL EXAMINATION.—Postoccipital glands greatly enlarged, also inguinal at its axillary. Lower one-third of left leg scar of old ulcer, three-fourths to one-half inches. Says it was traumatic, but stayed sore a long time. Liver occupies practically the whole abdominal region, except a small triangular space above No ascites. Very little pain. Spleen palpable. General appearance is that of a case of ordinary cirrhosis with ascites.

BLOOD:

Hemoglobin	60%	Polynuclears	68%
Reds	1,500,000	Small mononuclears	11%
Whites	11,284	Large mononuclears	18%
		Eosinophiles	2%
		Basophiles	1%

Wassermann positive.

Urine—Trace of albumen and bile; no casts.

Report of a Case of Extra-Uterine Pregnancy.*

By H. W. KOSTMAYER, M. D., New Orleans.

This paper is not an attempt to present anything new. It is merely the history of a case as obtained, with the treatment, submitted for what it is worth.

Mary Lewis, colored, aged 33, presented herself at the gynecological clinic, Charity Hospital, on May 19, 1911.

Family history is negative, as usual in this race, nor is there anything of value to her previous history. Her menses have always been regular, with no unusual discomfort. She suppressed only

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one time, during her pregnancy, seventeen years ago. Normal labor and puerperium. In bed nine days.

History of Present Illness: At odd times during the last few years she has had some pain in lower abdomen, never severe enough to cause her to go to bed. She saw no menses for the two months preceding consultation, and believed herself pregnant.

For the three weeks immediately preceding admission she has been losing copiously from the vagina; has suffered intense pain in lower abdomen, especially on the right side, and has been confined to bed, because of fever, weakness and general malaise. There have been occasional slight headache and backache.

Physical Examination: Sclera paler than normal. Chest negative. Abdomen below umbilicus tense and sensitive to pressure. External genitals normal, except for copious loss of blood. Vaginal mucosa quite noticeably paler than normal.

Bimanual examination shows cervix pointing to vaginal outlet, and distinctly soft at extreme tip. Fundus lying straight back towards sacrum, with its mobility markedly impaired. On the left side the vaginal fornix is limited and fixed, with a distinct mass above, rather hard, immovable, and sensitive. On the right side the vaginal fornix is encroached on by a mass above, which yields to pressure of the vaginal finger, is sensitive, and gives very much the sensation which dough does to the fingers when pressed upon. The mass is quite large, with very indefinite outline, especially above, where it is hard to say where it begins or ends.

The diagnosis I made and recorded is as follows: Left chronic salpingo oovitis; secondary retro-displacement of uterus; extra-uterine pregnancy on right side.

Patient's pulse was found to be 120, of very poor volume, and temperature 100°. She was admitted at once and put to bed, with an icecap on her abdomen. Liquids were given very freely, also viburnum, ergot and hydrastis. Her condition remained unchanged for forty-eight hours, when the bleeding from vagina lessened perceptibly, and the general condition slowly but surely improved. Six days after admission her pulse and temperature were normal, and all bleeding had ceased.

June 1, 1911, examination showed condition practically unchanged. The following day I opened the abdomen in the median line, and, after freeing adherent bowels, exposed to view a pelvis

filled with semi-organized blood clots. A ruptured tube on right side was found, with destruction of ovary. On left side a chronic salpingo-ovaritis had destroyed the function of the adnexa. A rapid supra-vaginal hysterectomy was done, abdomen closed in tiers, with relaxation silkworm gut sutures, and patient returned to work.

She left the hospital on June 15, before any symptoms of precipitated menopause could show themselves, relieved of all symptoms, and has not been heard from to date.

Gentlemen, I have burdened you with minute details to bring out just one point: Although I made a diagnosis of extra-uterine gestation, I did not operate at once, but put the patient to bed to watch her. Her condition on admission was such that the ordeal of a major operation would have been fatal. She was where she could be operated on at a moment's notice, with skilled attendants to watch her. After the expectant treatment described, laparotomy was a safe procedure—as safe as for the removal of an inflamed appendix, in the cold stage, with as little need for haste.

A learned teacher of mine was once good enough to call me a “crank” on the rest treatment in pelvic inflammatory diseases. If a few more cases such as this one fall to my lot I think he will have to call me a “crank” on “The expectant treatment of ectopic gestation.”

Recent Advances in Local Anesthesia.*

By CARROLL W. ALLEN, M. D., New Orleans.

Divinum est opus sedare dolorem (Divine is the work to subdue pain). Thus spoke Hippocrates.

Velpeau as late as 1832, was led to say that “To escape pain in surgical operations is a chimera which we are not permitted to look for in our time.” He little realized that he was on the threshold of general anesthesia, soon to be followed by the discovery of cocain and local anesthesia.

I often wonder why local and regional methods of anesthesia are not more popular. It is no doubt due to a combination of factors. General anesthesia, being the first discovered, claimed the

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field, and it has been hard to displace it, even in those procedures easily done by local methods. An accurate observance of details requiring gentleness and patience on the part of the operator is essential. Then, one must face the broad problem of whether it is desirable or not that the patient should retain consciousness during the performance of the operation. The objections are largely the fear and dread on the part of the patient. This is overcome in a great majority of patients by gentleness and a quiet, tactful attitude of the operator, aided by a preliminary hypodermic of a small dose of morphin. There are some patients who dread more than anything else the loss of consciousness. In these we find willing subjects. Some few, particularly nervous women, would prefer to be unconscious during the performance of any operation, but these are the exception. Many of the more commonly performed operations have reached such stages of development that any very great improvements in technic do not seem likely, nor is there need for such change, as the end results are good. But improvements can be made by offering to the patients a painless method that avoids general anesthesia, with its unpleasant and after-effects, and mortality directly or indirectly due to its use.

The after-pain, particularly if the operation is upon the trunk, head, neck or face, is much increased by the efforts at vomiting, and if these efforts are severe or prolonged the results of the operation may be compromised by the loosening of sutures in such cases as hernia.

With local anesthesia it is not necessary to starve the patient beforehand, but it is preferable that they have a light meal before the operation, and, as the gastric intestinal tract is not disturbed, the postoperative nourishment is not interfered with. This is of great importance in weak and debilitated patients and in the aged; many such patients can be successfully carried through a major operation by local means without any postoperative disturbance in their general conditions, while the after-disturbances of a general anesthetic may contribute to a fatal termination. Also in shock and septic conditions is general anesthesia contraindicated, and should not be used where local and regional methods can be employed. The great advantage of local or regional methods to prevent shock, or a combination of these methods with general anesthesia, is not fully appreciated by the majority of surgeons. Dr. Crile, in writing on this subject, states the following:

"It is well, also, to bear in mind that in inhalation anesthesia only a part of the brain is asleep. Complete anesthesia of the entire brain produces suspended animation or death.

"The medulla, at least, is but little affected, and the response of the unanesthetized portion of the brain is constantly observed in the course of operation; for example, the altered ration and rythm of the pulse and respiration, the change in the vaso-motor tone, as indicated by fluctuation in the blood pressure, the contraction of muscles, and, under light anesthesia, purposeless movements of the body, all show that a large portion of the brain is either partially or not at all anesthetized.

"These subconscious phenomena represent the discharge of nervous energy in response to mechanical stimulation of the prociceptors, and are vain, subconscious efforts of defense or escape. The greater such subconscious action, the greater the shock.

"In bad risks the subconscious response should, if possible, be wholly excluded by the combination of local with general anesthesia—the local anesthesia physiologically blocking the different impulses, thus sequestering the brain from harmful impulses."

Regarding the advances that have been made in local anesthesia in the last few years, we have several noteworthy additions to our armamentarium, namely, stovain, alypin, tropococain and novococain. These agents have occupied the attention and been investigated experimentally by the pioneers in this work, Schleich, Braun and Reclus, and, along with other less interesting agents, were studied by the Therapeutic Committee of the British Medical Association. The substance of their conclusions was as follows: They agree on all points except the action of stovain and alypin on the tissues. Braun and others claim that stovain is irritant to the tissues and alypin non-irritant, while Reclus claims that stovain is non-irritant and alypin irritant. My personal experience with them has been that they are both slightly irritant, and I have dropped them from use.

Stovain: Its injections were found to be silghtly irritant, causing vaso-dilatation and some after-pain. Strong solutions, 5 and 10 per cent, have caused local necrosis. Its action is less intense and of shorter duration than cocain.

Alypin: Its injections were found to be painful, causing marked redness and vaso-dilatation, and followed by redness, pain and often infiltrations. Strong solutions may cause necrosis.

Tropococain does not seem to be irritating, but has a dilating effect upon the vessels. Its action is of shorter duration and less intense than cocain.

Novocain does not appear to be at all irritating, and has no effect upon the vessels. It is slightly less active and of shorter duration than cocain.

Both stovain and novocain have slight antiseptic properties. All the above-named agents will stand a certain amount of boiling without decomposition, notably so with novocain, which has been said to be capable of repeated boilings without decomposition, and its solution will keep for a long time, several weeks, without losing any of its effects.

The relative toxicity of the various agents is given as follows:

Alypin, equal in toxicity to cocain; tropococain and stovain, one-half as toxic as cocain; novocain, six to seven times less toxic than cocain. This comparative feeble toxicity of novocain and its non-irritating action have gained for it the unqualified recommendation of all investigators, and it has accordingly become very popular. In using any of these agents for local use the advantage of the addition of a small quantity of adrenalin to their solution is so well known and has been so often spoken of as to justify its omission here.

Regarding the toxicity of cocain and its substitutes, the dose is relative and depends entirely upon the concentration of the sol. used and the rapidity of its injection and absorption into the general circulation. The same dose that will kill if thrown into the circulation at once, and in concentrated sol., can be exceeded many times in weak dilution when slowly injected over a large area.

Among the recent advances in technic may be mentioned vein anesthesia. Bier, before the Thirty-seventh Congress of German Surgeons, April, 1908, presented the following method, which can be used on any of the extremities:

The limb is first rendered completely ischemic by the use of an Esmarch bandage. The point of injection is selected and a thin rubber bandage (a Martin bandage) is placed above the point of injection and a similar one from four to six inches below the first. One of the large venous trunks is then opened, under local anesthesia, and a canula inserted; $\frac{1}{2}$ oz. novocain in normal salt solution is injected, 50 c. c. for the arm and 80 c. c. for the leg.

The solution travels through the various channels of the part, and diffuses through the vein walls into the surrounding tissues, where it comes in contact with all the nerves passing through the area. It takes about fifteen minutes for the full effects to become noticed. We then have a direct anesthesia of the parts between the two bandages and an indirect anesthesia of the distal parts. The method is simple and satisfactory when all details have been carried out.

The anesthesia lasts over an hour, or as long as the retaining bandages are kept in place, and rapidly disappears when they are removed. Before their removal the veins may be washed out with normal salt solution to remove what may remain of the anesthetic solution. The method is suitable for any operation on the extremities, and offers a great advance in regional anesthesia.

Of considerable scientific interest is the introduction of arterial anesthesia. The limb is rendered ischemic by an Esmarch band and the main artery of the part exposed below this point; the constrictor is released sufficiently to allow slight arterial flow, and the anesthetic fluid, 4 to 8 c. c. of from $\frac{1}{2}$ to 1 per cent injected with a fine needle into the lumen of the artery, in the direction of the blood flow, and is carried to all parts receiving their blood supply from the artery. After an interval sufficient to allow thorough diffusion the constrictor is tightened again.

The method is still in the experimental stage, but is said to produce a satisfactory anesthesia. The vessel does not seem to suffer as a result of the injection. Of course, it can only be used in healthy arteries. The method is certainly unique and interesting, but I doubt if it will ever become very popular with practical surgeons, as it presents many objections, and we have other satisfactory methods of attaining the same end.

In the last few years some very interesting observations and experiments have been made on the sensibility of the abdominal organs which have completely upset the former views held on this subject. The most interesting is the recent work of Hast and Meltzer, which I will give at some length, and partly in the authors' own words.

It had previously been held, as the result of Lemander's work, that the abdominal viscera and visceral peritoneum were insensitive to pain, while the parietal peritoneum was sensitive. Lemander's

experiments had been conducted by opening the abdomen with cocain solutions, using usually the Schleich formulas. These results were generally accepted, and were found to be correct by many observers working under similar conditions.

But Hast and Meltzer changed the order of procedure and opened the abdomen under general anesthesia. The wound was then loosely approximated and the animal allowed to recover. The wound was then gently opened, and various parts of the alimentary canal exposed and tested for sensibility in a variety of ways, by pinching, sticking with an electric needle.

Hast and Meltzer state:

"All experiments lead up to one unmistakable result, which can be stated in a few words: the normal gastrointestinal canal possesses the sensation of pain. But besides the difference in the subjects of the observations there was a difference in the conditions under which both observations were made. Lemander operated essentially under Schleich's infiltration anesthesia. Schleich's mixture, as Lemander employed it, consisted of five centigrams of cocain, one centigram of morphin and two hundred cubic centimeters of a normal salt solution.

"It seems advisable to us, as a further step in our investigation, to study the possible effects of these ingredients upon the sensation of pain in the abdominal organs.

"We begin with cocain. The hitherto known effect of this drug is its local anesthetic effect.

"Lemander and other surgeons employed it for this very quality to deaden the pain during the incision, apparently without the remotest idea that the drug could also affect the sensibility of the distant isolated gut.

"We nevertheless decided to test it. After establishing the undoubted sensitiveness of the intestines, etc., two centigrams of cocain were injected into the tissues of the abdominal walls near the incision. We were then surprised, indeed, when we discovered that a short time after this injection all sensations disappeared from the intestines. Even a very strong electrical stimulus no longer produced any reaction or effect. After thirty minutes the sensation returned.

"Such observations were then repeatedly made, and invariably with the same results.

"Now, we could hardly think that the cocain crept over by capillarity or by some other manner to the intestines, and the observed anesthetic effect was a local one. Neither did it seem probable that the cocain crept along the spinal nerves to the spinal cord, and then come in contact with the pain-carrying nerve fibers from the intestines. The most reasonable explanation was that the anesthetic effect was produced through the circulation. That would mean that cocain had not only a local, but also a general anesthetic effect. This assumption was easily tested.

"The cocain was now injected in parts distant from the abdominal cavity, in the thigh, arms, pectoral muscles, etc. The anesthetic effect upon the intestines was prompt and complete just the same.

"In further experiments we have established that one centigram was sufficient to bring out the desired effect, and this even in large dogs weighing fourteen kilos."

"We have, then, thus far established two facts: That the gastrointestinal canal possesses the sensation of pain, and that the subcutaneous or intramuscular injection of a comparatively small dose of cocain is capable of abolishing this sensation for some time.

"We believe that we are now justified in offering the following interpretation of the surgical observations: While we have not the slightest doubt of the correctness of the facts, namely, that when operating under Schleich's infiltration anesthetic, the abdominal organs are completely anesthetized. We suggest that this anesthesia is due essentially to the general effect of the cocain employed, and not to a normal absence of sensation in these organs.

"In the course of the investigations we exposed some intestinal coils to the drying effect of the air in order to bring on some inflammation, and we then found that inflamed organs are distinctly more sensitive than normal ones; in fact, the sensitiveness is often greater than that of the skin.

"Now, Lemander and other surgical observers stated that, in their experience, also inflamed organs are completely anesthetic. We have, therefore, tested the effect of cocain upon the exaggerated sensitiveness of inflamed intestines and found that a somewhat larger dose of cocain, say three centigrams, will completely abolish all sensations also from inflamed organs.

"Another interesting point is the observation that the parietal peritoneum also loses its sensation by a hypodermic injection in any part of the body, but the anesthesia sets in here later and disappears earlier than in the internal organs.

"It is possible also that the degree of the anesthetic is lesser, but we are not yet ready to make any positive assertion on that point.

"An interesting and new fact is the observation which we made on the effect which the injection of a small dose of cocain exerts upon the psychical condition of the animal: it promptly quiets its excitement. The animals, which were very restless, howling and crying, became perfectly quiet one or two minutes after an intramuscular injection of cocain. It may be claimed that the quietness was due to the abolition of the pain.

"We have tested it on etherized but not operated dogs. On awakening from ether they howl just as much as operated animals; the howling is not due to pain, but to the ether intoxication. An injection of cocain quiets them promptly.

"The psychical effect seems to last longer than the anesthesia of internal organs. The injection has no narcotic effect; the animal is apparently wide awake, and follows one with his eyes. The lid reflex is not abolished, but the cornea is anesthetic, and the pupil is widely dilated.

"Whether the general sensibility is also reduced, that question we are not yet ready to answer for the present."

Equally interesting and surprising are some of the observations made during intracranial surgery. Drs. Thomas and Cushing have lately reported a case of subcortical acute tumor on which they attempted operation four times, and each time were forced to abandon the procedure on account of the bad way the patient took the general anesthetic and the tremendous vascularity of the intracranial parts induced by the congestion from the anesthetic. The tumor was subsequently successfully and painlessly removed without a general anesthetic.

I have had occasion to resort to almost similar procedure myself several times. In case an extensive intracranial exposure is necessary the soft parts and bone are opened under general anesthesia,

then, at a subsequent operation, the dura is opened and the tumor removed, either with or without the use of a little local anesthetic on the raw edges of the soft parts and dura as the case may require. The operations were always painlessly performed, as the brain is devoid of painful sensations and the work much simplified by having a much reduced vascularity of the intracranial parts. This vascularity is further lessened by doing the secondary operation in the sitting position.

I could protract this discussion indefinitely, but what I have said will refreshen our minds on some of the more recent interesting developments in the field of local anesthesia.

I may add that, in the performance of some operations, I almost invariably use local or regional methods; when general anesthesia is used it is the exception.

To give an idea of the scope of this work in the last few weeks we have had the following: Vesical stone in a weak and feeble patient. He refused general anesthesia and would not go to an institution. He was accordingly operated at home. The bladder was found small and retracted on account of the frequent spasms around the stone. The bladder was inflamed and too sensitive to dilate it or lift it into the wound by the use of a staff passed through the urethra. Accordingly the abdominal cavity was opened and the bladder, which was very small, with hypertrophied walls, was caught and brought up into the wound, where it was opened and the stone removed. The procedure was entirely painless, and the subsequent course of the case was without incident.

Another interesting case was one that was operated on in a confrère's office during the last few days—a case of epithelioma of the cheek, which had been operated on before, followed by recurrence. The diseased process involved the side of the cheek, also of the nose and the superior maxillary bone. It had opened the nasal fossa and gone down into the mouth. It was thought best to use the cautery rather than the knife. Accordingly, the parts were anesthetized with novocain solution and the diseased area, including the bone, thoroughly burned out with the cautery. The procedure was painless, and the patient left the office shortly after.

In my ward at the Charity Hospital are several interesting cases convalescent from operations under local anesthesia, one craniotomy; two hernias and one gastrotomy.

Before closing I would like to discuss one other point—that of time. Time is always an important consideration in the surgeon's work. One objection to the use of local anesthesia, advanced by many, is the increased time necessary for the procedure. This, I have not found to be the case, as I actually save time by the method. The objections advanced may possibly hold good with very busy men, who operate a great many cases daily, and have one case rolled in after another, each anesthetized and ready for operation. But with the average operator, whose work does not exceed two or three cases daily, and where the patient is not anesthetized until all is ready and the operator stands with folded arms waiting ten to fifteen minutes for the patient to "get under," here much time can be saved and your time in the operating-room much reduced by getting to work at once. While it is not a good idea to time yourself in an operation, where thoroughness and safety may be sacrificed to speed, I have, in such operations as hernia, where I have observed the time, noticed that the procedure was completed within half an hour, and hardly consumed five minutes longer.

Obstinate Pruritus Cured by Excision of the External Organs of Generation.*

By C. G. COLE, M. D.,

Second Assistant House Surgeon, Charity Hospital, New Orleans, La.

In the hope of running across something that might be worthy of your hearing, I have decided to report an obstinate case of pruritus cured by excision of the external organs of generation.

Pruritus vulvæ is a symptom of which much is written, many theories advanced as to its causative factors, and numerous drugs and remedies proposed for its relief, but all of these fade into utter insignificance when a particular case peculiar to itself is met with. After all of the known or supposed causes are given careful weight in an effort to arrive at the proper etiological factors in the production of the condition, we still have to proclaim our ignorance and look to the future for a solution of the problem.

Among the many causes which have been advanced and are now generally recognized as producing the condition are: The various diatheses, diabetes, nephritis, icterus and circulatory disturbances;

* Read before the Orleans Parish Medical Society, August 28, 1911.

gout and rheumatism; fibrosis, affecting chiefly the nerves and nerve endings of the clitoris and labia minora; any abnormal or unhealthy conditions of the genital organs, including all irritating discharges of any description from the bladder, rectum or vagina; atrophic changes due to the menopause and old age; pathological conditions of the external and internal organs of generation, and also of bladder and rectum; cutaneous diseases of the vulva; dietetic and hygienic errors; deranged metabolism, and any toxic materials which may be in the blood. Exceptionally it is claimed to be due to some reflex irritation provoked by intestinal disease or some disorder of the internal generative organs, and, lastly, to some neurotic condition. There are rare cases which suffer only at time of menstruation, and others only during pregnancy. While some patients only suffer in winter, there are others who only experience the symptoms in summer.

Among some of the exciting causes may be mentioned masturbation, undue manipulation of the parts, irritants applied to the skin, the presence of pediculi, ascarides, and various forms of known vegetable parasites, and possibly some hitherto unrecognized organism may, in the future, be found to enlighten us on the subject.

The case in question alludes to a Mrs. H., a married woman, 33 years old, and a mother of one child, with a history of two abortions. Her general health is good, and has always been so, with the exception of occasional attacks of indigestion. She was nervous and despondent. Her family history was good, and seemed to be free from any inherited neuroses or diatheses. She had been a sufferer from itching in the genitals for three years, but up to one year ago the attacks were only periodical and not severe, and were provoked if she became very warm or did a good deal of walking. For the past year, however, the attacks of itching grew more frequent and severe, and, for the past six months, almost constant and intolerable, causing loss of sleep and the associated consequences derived therefrom, the patient becoming despondent and almost desperate at times. The patient applied to me for treatment, with the history that she had been treated by many able physicians with little or no relief, and one had advised operation, and it was for advice regarding the efficiency of operation for these conditions that I was consulted. On questioning her I found that

she had been curetted, hoping it was due to a leucorrhœal discharge which was present, and that almost everything that has ever been recommended for the alleviation of this dreadful condition had been persistently tried to no avail.

After all local and constitutional measures had failed to give relief I felt forcibly my weakness in attempting a repetition of treatment which had failed in the hands of my colleagues, and, had it not been for the fact that she was bitterly opposed to operation, I would probably have advised that procedure at first consultation. After a month's treatment, trying many of the most highly-recommended measures for relief from this condition with little or no success, and eliminating, so far as possible, all the other recognized causes, I began to think that the itching in this particular case must be due to fibrosis in the terminal nerve filaments, and advised operation, and with her consent she was admitted to Hotel Dieu Sanitarium and prepared for operation on April 10, 1911. The operation involved the removal of the clitoris and its prepuce, part of the mons, the labia minora, part of the vestibule, and the integument from the inner aspect of the labia majora.

Upon examination the inner surfaces of the labia majora were found to be whitish in character and the epidermis very much thickened, the labia minora not prominent, and the clitoris was almost completely concealed beneath the prepuce tissues, which were white, indurated and very much thickened. Further from center of involvement the surface had a reddish, shiny appearance, and some small ulcerative areas present, with marked manifestation of undue manipulation of parts excited by unbearable itching.

OPERATION.—After patient was fully anesthetized with ether an elliptic incision outlining the area to be removed was made from the upper margin of the mons and extending down on either side a little to the outer margin or dividing line between the outer and inner surfaces of the labia majora to the level of the vaginal floor. An incision was then made upward from the lowest point of first incision on either side, meeting beyond and above the urethra, forming a crescent. The involved area, including the whole thickness of the skin, the clitoris, the labia minora and a part of the vestibule and labia majora, was rapidly dissected away, and bleeding points secured with forceps and ligated with small catgut. It was surprising how little bleeding was present. The

wound was then closed by approximating the edges with silkworm gut sutures, leaving a line of sutures resembling an inverted "Y." The parts readily came together, with little or no tension. The symptoms were immediately relieved. The wound healed by primary union, the sutures being removed on the ninth day and the patient allowed to go home on the eleventh day after operation. Four months have elapsed, with no return of symptoms, and the patient feels much elated with her condition.

Louisiana State Medical Society Proceedings.

EDITED BY PUBLICATION COMMITTEE,

DR. JOSEPH D. MARTIN, Chairman, 141 Elk Place, New Orleans, La.

DR. ERNEST A. ROBIN, New Orleans, read a paper entitled

Dislocation of the Crystalline Lens—Report of Cases.

The extraction of a clear lens from the vitreous chamber is one of the most difficult in ophthalmic surgery. Indeed, in the opinion of no less an authority than Prof. Fuchs, of Vienna, the lens may be so dislocated and occupying such a position on the background of the eye that its extraction becomes impossible. So far, I am glad to say, such a disappointing experience has never fallen to my lot.

Whether the lens has been dislocated backwards, into the vitreous, or forwards, into the anterior chamber, or resting obliquely against the iris, in the pupillary area, partly in the anterior and partly in the posterior chamber, its extraction becomes imperative, and the only alternative is enucleation of the eyeball. When occupying these abnormal positions the lens is converted into a foreign body in the eye, and, as such, inevitably does mischief. The most frequent complication set up is secondary glaucoma, with its attending evils, calling for immediate extraction of the lens in order to save what sight remains, or, failing in this, enucleation of the eyeball for the relief of pain or as a protective measure against sympathetic ophthalmia.

In order to understand clearly what is meant by a dislocation of the lens, one should bear in mind that the lens, in its capsule, lies immediately behind the iris, rests in the fossa patellaris, a depression in the anterior part of the vitreous, and is held in position by the suspensory ligament which is attached to the lens along its equator, and is inserted into the tip of the ciliary processes. A partial rupture of this suspensory ligament results in a subluxation or partial dislocation of the lens, a condition which, if found to be permanent or non-progressing, not giving rise to symptoms of serious trouble or not damaging sight materially, may well be left alone as far as operative interference is concerned.

In this paper we are concerned particularly with dislocation of the lens, resulting from a total rupture of the suspensory ligament. This may be brought about spontaneously, as a result of weakness of the suspensory ligament, through faulty development or secondary to disease of the tunics of the eyeball, as, for instance, malignant myopia. Trauma is also a fruitful cause of dislocation of the lens, and may, by *contre coup*, force the lens through a scleral rupture to a point under the bulbar conjunctiva without damage to the latter membrane. In this case, a simple incision of the conjunctiva over the lens suffices for an easy extraction. This is an exceedingly rare accident, seen only once by the author.

In the case of an anterior dislocation, the lens occupies nearly the whole anterior chamber, and, on account of its position, the incision in the cornea or limbus to be made for its extraction is rendered extremely difficult, because of the fact that injury to the lens with the knife should be avoided. When the lens is partly in the anterior and partly in the vitreous, lying, as a rule, obliquely in the pupillary space, care must be taken to prevent its sinking to the bottom of the vitreous chamber. This can be effected by first transfixing the lens with a needle before making the incision in the limbus, after which extraction can be made, either by manipulation with a Daviel's spoon or by the introduction into the eye of Taylor's vectis.

A lens dislocated into the vitreous invariably demands the use of the vectis for its extraction, and loss of more or less vitreous is generally the rule. The operator counts himself very fortunate, indeed, who extracts successfully a lens from the vitreous without loss of this humor. The loss of a small amount of vitreous is not

of grave importance in the ultimate results, but it must not be forgotten that this complication increases immensely the risks of infection by filling the lips of the wound with an admirable medium for the growth of micro-organisms.

In spite of this complication, which nearly always obtains, healing has gone on rapidly and uninterruptedly in all of the cases forming the basis of this report. They represent all the cases of this nature operated on by Dr. Bruns and myself during the past three years in the service of Dr. Bruns and before my Polyclinic class at the Eye, Ear, Nose and Throat Hospital.

A little over a year ago I extracted successfully a clear lens dislocated into the vitreous of a negro, making the usual incision with a good-sized conjunctival flap. There was considerable loss of vitreous, and in spite of trimming off all prolapsing vitreous, a solid mass of this humor became so engaged between the lips of the wound as to prevent coaptation of the flaps. Fearing, on this account, necrosis of the corneal flap, I applied a fine silk suture through the conjunctival flap and the bulbar conjunctiva, bringing together the lips of the wound, and rapid healing followed. It occurred to me that, if stitching of the flap was a good procedure, how much simpler and more effective it would be if, instead of a conjunctival flap, we made a bridge of conjunctiva, say about four m. m. in width and of sufficient length to permit of easy introduction and manipulation of the vectis. Acting upon the idea, all my subsequent cases have been treated according to this method, with uniformly good results in rapidity of healing and in appearance of the eye.

All the operations were made under local anesthesia obtained by injecting about ten minims of a solution of one per cent cocaine, one to five thousand adrenalin chloride in normal salt solution. The Blanco bandage was used in every instance, and all patients were treated as ambulant—that is, immediately after operation, they were allowed to go to their homes in the city to return to the clinic on the following day.

OBSERVATION I.—J. R., negro, male, *aet* 35, came to clinic April 2, 1910. Three days before was struck on left eye by swiftly moving leather belt. R. V.=20/xv. L. V.=1. p. Anterior chamber full of blood; severe ciliary hyperemia. Tn. Atropin and hot applications. April 6. Blood absorbed sufficiently to show

lens dislocated into vitreous. April 14. Extracted lens with vectis, after making incision with large conjunctival flap. Considerable loss of vitreous. After trimming off prolapsing vitreous a mass of it still presented between the lips of the wound, preventing their proper closure. Applied a fine silk suture through conjunctiva of flaps and bulbar conjunctiva, approximating surfaces neatly. Blanco bandage. Wound healed evenly on third day. Bandage changed every other day, and kept up until May 14, 1910, when dark glasses were ordered. June 21, 1910. L. V.=fings@5" R. V.=20/xv. Thick membrane in pupillary space adherent to iris. Discussion advised, but refused by patient. Eye is quiet and cosmetic. Result is perfect.

OBSERVATION II.—J. V., male, negro, *aet* 44, came to clinic October 18, 1910. Right eye was struck by a piece of wood while chopping on September 14, 1910, and has been blind ever since. R. V.=l. p. L. V.=20/xv. R. E. cornea cloudy. T.+1; pupil widely dilated. Lens dislocated into vitreous. October 20, 1910. Extracted lens with vectis after making an incision with conjunctival bridge. No loss of vitreous. Bandage. October 23, 1910. Wound healed; doing well. Bandage. November 12, 1910. Discharged, with eye quiet and good cosmetic result. R. V.=l. p. L. V.=20/xv.

OBSERVATION III.—J. C., male, negro, laborer, *aet* 65, came to clinic October 6, 1910. While chopping wood, a month ago, a piece flew up and struck his right eye. R. V.=l. p. L. V.=20/lxx. R. E. Dislocation of lens into vitreous. No symptoms of irritation. October 13, 1910. Extracted lens with vectis, making a good conjunctival bridge. Very small amount of vitreous lost. Bandage. October 15, 1910. Wound healed, moderate reaction. Discharged November 4, 1910. Eye quiet and good cosmetic result. R. V.=l. p. L. V.=20/xxx.

OBSERVATION IV.—R. T., male, negro, laborer, *aet* 29. Came to clinic on July 12, 1910. Was struck on right eye five years ago with a baseball. Left eye had exclusion and occlusion of pupil. Right eye had a subluxation of lens inwards and backwards, part of periphery of lens had been absorbed. R. V.=fings@10'. L. V.=l. p. July 14, 1910. Made a thorough discussion of lens in R. E. with Ziegler needle. Atropin and bandage. Eye did well until July 23, 1910, when tension rose and eye became very

painful. Made a linear extraction and succeeded in removing the bulk of cortical in anterior chamber. Patient returned on July 25 with severe pain in eye and temple. Atropin, neuronidia and bandage. Next day he felt better. Dionin dusted in eye and Arlt's salve rubbed on forehead daily. Did well under this treatment until August 16, 1910, when tension rose very high and pain very severe. Linear extraction again practised. This was followed by complete and permanent relief. Patient left October 12, 1910, with R. V.=fings@15'; lens completely, with only a small band of thickened capsule running vertically across pupil.

OBSERVATION V.—R. A., male, negro, *aet* 33. Came to clinic May 29, 1909. Was struck on left eye with a baseball seven days ago. R. V.=fings@10'. L. V.=O. L. E. Dislocation of lens into anterior chamber. May 30, 1909. Severe pain and rise of tension in left eye. Eserin and hot applications. June 7, 1909. Extracted lens with vectis after making a good corneal section with conjunctival flap. Small loss of vitreous. Bandage. June 28, 1909. Wound entirely, with small incarceration of iris in scar. Bandage discontinued. August 16, 1909. Iridectomy attempted, to release tension on incarcerated iris, but failed on account of fibrous and tense condition of iris. September 13, 1909. Eye looks well and quiet. Discharged. R. V.=fings@10'. L. V.=O.

OBSERVATION VI.—S. T., male, mulatto, laborer, *aet* 54. Came to clinic February 16, 1909. R. V.=l. p. L. V.=20/xx. On January 6, 1909, while chopping wood, a piece struck his right eye. He complains of constant pain ever since. R. E. Dislocation of lens, partially into anterior and partially into posterior chambers. February 18, 1909. Extracted lens with vectis. Incision with conjunctival flap. Small loss of vitreous. Bandage. February 25, 1909. Wound healed. Bandage. March 5, 1909. Discontinued bandage. March 13, 1909. Eye quiet. Discharged. R. V.=fings@4". L. V.=20/xv.

OBSERVATION VII.—N. S., male, negro, laborer, *aet* 60. Came to clinic September 9, 1909. R. V.=20/xxx. L. V.=l. p. Had a fall on his back eight months ago. Sight bad in left eye ever since. L. E. Dislocation of lens into anterior chamber, with rupture of capsule. September 16, 1909. Made an incision with conjunctival flap and extracted lens with vectis. No vitreous lost. September 18, 1909. Wound healed. Bandage kept up until

October 20, 1909, when he was discharged with R. V.=20/xxx. L. V.=fings at 5'.

OBSERVATION VIII.—C. W., male, negro, laborer, *aet* 54. Came to the clinic September 29, 1909. While chopping wood last February a piece flew up and struck his right eye. R. V.=fings, at 10'. L. V.=20/xx. R. E. Subluxation of lens, backwards and downwards. Went home, and returned November 25, 1909, with pain in right eye and marked elevation of tension. R. V.=l. p. Extracted lens, at once, with vectis, after making an incision with conjunctival flap. Lost about 3ss of vitreous. November 27, 1909. Anterior chamber restored. Eye looks very well. Discharged December 8, 1909. R. V.=l. p. L. V.=20/xx. R. E. quiet.

OBSERVATION IX.—H. B., female, mulatto, laundress, *aet* 50. Came to clinic March 2, 1909. L. E. Pains all the time. Six years ago, while chopping wood, left eye was struck by piece of wood. Lens dislocated into anterior chamber. R. V.=20/xl. L. V.=l. p. March 11, 1909. Extracted lens with vectis without accident. Incision with conjunctival flap. Bandage. March 20, 1909. Eye doing well. Wound completely healed. Discharged free from pain and eye looking well on April 12, 1909. R. V.=20/xl. L. V.=l. p.

OBSERVATION X.—A. P., negro, laborer, *aet* 49. Came to clinic February 16, 1909. R. V.=20/xl. L. V.=fings@2". A month ago, while chopping wood, a piece of it struck his left eye. Dislocation of lens into vitreous. Slight, constant pain; elevated tension, cloudy cornea. March 27, 1909. Extracted lens with vectis, after an incision with conjunctival flap. Only a small escape of vitreous. Bandage. April 4, 1909. Wound healed completely. May 7, 1909. Discharged, improved. R. V.=20/xx. L. V.=fings@2".

OBSERVATION XI.—J. C., white, male, school boy, *aet* 9. Came to clinic December 4, 1908. R. V.=20/xv. L. V.=fings@2'. On December 2, 1908, he walked into a dark room and fell against the sewing machine, the angle of which struck his left eye. Lens dislocated into chamber, with rupture of capsule. There is some ciliary injection. Tu. Lens is swollen and cataractous. Atropin and dionin powder into eye daily at clinic. January 12, 1909. Lens absorbing rapidly. Continue treatment. January 22, 1909. Only small particle of lens matter remains. L. V.=fings@5'.

February 5, 1909. Lens completely absorbed. L. V. with $+12^s$. $=20/1xx$. March 20, 1909. Pupil not quite round, and is about two-thirds dilated. All well. Discharged. R. V. $=20/xv$. L. V. $+11^s$. $=20/1xx$.

OBSERVATION XII.—A. M., negro, male, farm laborer, *æet* 55. Came to clinic April 11, 1908. R. V. $=1$. p. L. V. $=20/1xx$. R. E. was struck with a stick thirteen days ago. Eye painful ever since. Dislocation of lens into vitreous, with abrasion of cornea. T. $+1$. April 23, 1908. Extracted lens with vectis, after making an incision with conjunctival flap. The corneal flap is everted by prolapsing vitreous. This is trimmed off, flaps properly replaced and bandage applied. April 25, 1908. Wound healing well. Quite improved.

OBSERVATION XIII.—P. McC., negro, female, cook, *æet* 33. Came to clinic September 30, 1907. R. V. $=O$. L. V. $=20/xl$. Husband struck her on R. E. with his fist eighteen months ago. Complains of eye running water all the time. Lens, now considerably shrunk, is dislocated into anterior chamber. Cornea is leucomatous in center. October 3, 1907. Extracted lens with vectis after incision with conjunctival flap. No loss of vitreous. October 30, 1907. Wound entirely healed and eye quiet. Discharged. R. V. $=O$. L. V. $=20/xl$.

OBSERVATION XIV.—F. F., white, female, married, housework, *æet* 24. Came to clinic February 27, 1911. R. V. $=fngs@3'$. L. V. $=fngs@3'$. No history of trauma. Sight in both eyes became suddenly much weaker about eight days ago. R. E. Subluxation of lens downwards and backwards. Scope shows no evidences of myopia. L. E. Dislocation of lens into anterior chamber. Eye very painful. T. $+1$. March 8, 1911. L. E. extracted lens with vectis after incision, with conjunctival bridge. No loss of vitreous. Bandage. March 29, 1911. Wound healed completely. Discontinue bandage. L. V. $+11^s$. $=20/cc$. April 12, 1911. R. E. Lens nearly completely dislocated into vitreous. No pain nor rise in tension. R. E. Extracted lens, with vectis, after incision, with conjunctival bridge. Made a good iridectomy. A bead of vitreous presented in the wound. Bandage. April 15, 1911. Wound healed. Continue bandage. May 3, 1911. Discontinue bandage. May 24, 1911. Discharged improved. R. V. $+10^s$. $=20/l$. L. V. $+9^{00s}$. $=20/1xx$.

OBSERVATION XV.—L. M., white, female, *æet* 6. Came to clinic

January 16, 1911. Too young and intractable to take vision. For about a month both eyes get red and painful, and child complains of not seeing well. R. E. Dislocation of lens into vitreous. L. E. Dislocation of lens into anterior chamber. January 25, 1911. Under local anesthesia, with great difficulty, owing to indolility of patient, extracted lens from left eye, with vectis. Incision made with conjunctival bridge. Small amount of vitreous lost. Bandage. January 27, 1911. Eye looks well. Anterior chamber restored. March 1, 1911. Bandage discontinued. Eye looks well and is quiet. L. V.=fings@5' easily. March 14, 1911. R. E. Under general anesthesia, extracted larger part of lens, with vectis, under a conjunctival bridge. Operation extremely difficult. A few beads of vitreous lost. Bandage. March 16, 1911. Wound healing well. March 23, 1911. Wound healed. Ciliary injection severe; complains of pain. April 14, 1911. Eye is softening as result of irido-cyclitis. No pain. May 24, 1911. Eye is gradually going into atrophy. L. E. is doing very well. Tu. Counts fingers at eight feet.

A brief summary of the fifteen cases reported shows 11 negroes, 3 whites and 1 mulatto; 12 males and 3 females, from 6 to 65 years old; average age, 40. From trauma, 12; 6 from chopping wood, 2 struck by baseball, 1 blow of fist, 1 fell on his back, 1 struck by leather belt, 1 fell against sewing machine, 1 struck with a stick; spontaneous, 2. Good cosmetic results in all cases. Improvement of vision in 9 cases. Loss of vitreous in 9 cases; no loss of vitreous in 8 cases. Dislocation into vitreous, 12 cases; into anterior chamber, 4 cases; partially into anterior and partially into vitreous chamber, 1 case. Laborers, 11; laundress, 1; field work, 1; school boy, 1; no occupation, 1.

DR. L. G. LEBEUF, New Orleans, read a paper entitled

Toxic Cerebro-Spinal Meningitis in a Child Treated by the Murphy Drip; Recovery;

I was called on April 15 to see a child of nineteen months, weighing thirty pounds, previously in perfect health, who, twenty-four hours before my visit, had eaten a large slice of raisin bread. When I first saw the little boy he had a high fever and was very nervous. I had him sponged and icebags placed to his head, and had him

given, every two or three hours, enemas of bromids, chloral and asafetida. In the course of a few hours later I was called in a great hurry because the little patient was seized with a violent and most vigorous convulsion, which was not controlled by hot mustard water immersion until I had anesthetized him completely with chloroform. After the little patient was over the convulsion, which had lasted three-quarters of an hour, he remained very nervous, and I kept up the enemas begun previously, icebag to his head, sponging with cool water and a purge of triturate tablets of calomel, 1/10 grain, every hour, which was followed by a dose of salts. It was the second day that the child passed, in a large saline lavage, some foul, undigested raisins from the intestines in a state of decomposition. During the first week the fever ranged between 101° to 105°, and he was quite nervous all the time, complaining of pains in his head, back of his neck, in the muscles of his shoulders, and I had to keep him under the effect of bromids all the time. He could not keep any quinin, which I tried to give him, on account of his intense nausea. I tried to control the fever with frequent sponging of his body with a quinin liniment, consisting of cologne, soap liniment and quinin. In his sleep he had nervous trismus and frequent subsultus every few minutes. When he was awake his eyes could not stand the light, and I had to keep him in perfect darkness, obscuring the transoms and covering the windows with sheets. On the sixth day he began having, besides the pains of neck and shoulders, considerable stiffness of these muscles. I could then notice the marking of the skin, passing a pencil across, remaining red for a few seconds, and the pressure of my hand firmly on the skin, remaining marked for a number of seconds, causing what the French call "*la tache cérébrale*." Though I had the bowels to move freely, he had almost continuous vomiting, and I had to nourish him with a little barley water and some liquid peptonoid, lime water or vichy, and crushed ice. He had a general nervous irritability and hyperesthesia all over his body, and nearly all the time he had a mild delirium, with his sclerotics turned up and backwards, and the pupils of his eyes turned backward as if they were looking at times at the palpebral conjunctivæ. After the first week there was a beginning of rigidity of neck and the muscles of the shoulders, and later it extended to the muscles of the lower extremities. The patellar reflexes were exaggerated

the first week, but nearly lost entirely by the second week. The Babinski sign of the plantar reflexes was also exaggerated.

This case appeared very distinctly one of cerebro-spinal meningitis, and from the history or etiology, though I did not get any of the spinal fluid, as no lumbar puncture was made, the objective signs showed the cause of the fever was due to a ptomain or toxic intestinal cause, on account of the ingestion of raisin bread. I treated him, besides using ice to head and counter-irritation of the upper part of the spine, with Murphy drip. The *modus operandi* of this was to agree to the temperature of water upon which I had decided, and to get the tube to run through a vessel, hot or cold, so as to keep the temperature of the water either warm or cool, as was necessary, and to arrive at this conclusion I used a No. 10 catheter high up in the intestine. In the beginning of the use of this—in fact, for the first two weeks, until the child began to improve—I gave him plain saline solution, as cool as possible, so as to reduce temperature for about an hour, and after that I would give it fifteen minutes every hour. After the first two weeks I began adding a little nourishment with the saline infusion, liquid peptonoid, predigested milk and a little barley, thereby increasing the nourishment and the elimination of the bacteria or ptomain condition of the intestine. At the end of three weeks, May 1, the child's temperature for the first time got down to 100°, and I succeeded, after that, to nourish him, but the Murphy drip was continued until May 13. The patient was discharged completely well on June 29, making over two months of a most serious illness.

The child had gone down from 36 pounds, his weight before the convulsions, to 18 pounds, and was dreadfully emaciated; all the muscles were loose and limp, and the spinal processes of vertebrae were all inflamed, and the seventh dorsal ulcerated and nearly cut through the skin. To relieve the intense nausea, as the patient could not keep any other food, it was put on goat's milk, which agreed with him very well. He weighs now over 45 pounds, and is a fine, strong and healthy child, in splendid condition; no paralysis of any kind, with good return of all his reflexes, and with perfect sight. On December 29 he had another convulsion, because of too much eating during Christmas week. The convulsion lasted only five or ten minutes, and promptly answered to a little chloroforms and to the enemas, used as before, of bromids, chloral

and asafetida, keeping the child on a rigid diet for two or three days. He has since been perfectly well.

Neurologists may criticize my rather crude methods, and also the fact that I have not tried to relieve spinal pressure by making a lumbar puncture, or that I did not use any Flexner's serum, but in general practice I have found for the last twenty-five years, as a physician, that results, after all, are the best thing, and I prefer my patients to get well, even if they have not gotten well according to Hoyle.

In April I called Dr. Fenner in consultation with me. It was the eleventh day of its illness, and the child had for a few minutes a temperature of 106° . His pupils were widely dilated, and the child had such fever and suffered so much pain, and pulse was irregular and weak, that we gave $1/16$ of a grain of morphia and $1/500$ of a grain of nitroglycerin. A few days after that we had to repeat the morphia, and, as the pulse continued at about 160 to 180, we kept on with the $1/500$ of a grain of nitroglycerin and 3 to 5 gtts. of digitalis. Dr. Fenner then kept on seeing the case with me until the child became perfectly all right, and as I had a call to Canton, Miss., on April 24 and 25, to see a very sick patient, who died, Dr. Fenner had the entire charge of the case for a day or two. We just kept on with Murphy drip, as I had started, only modifying it somewhat. The child was then as sick as it could be, and we discussed the necessity of making a lumbar puncture, or of using Flexner's serum. My confrère did not think I should change this treatment, as the little sufferer was doing fairly well, and the pupils then began to react a little, and soon we saw marked improvement.

The patient has been recently at my office, suffering with a simple cold, and is absolutely all right, with the use of all its nerves and organs—really a perfect result for such a bad case of cerebrospinal meningitis.

DISCUSSION OF PAPER OF DR. LeBEUF.

A MEMBER: I would like to ask Dr. LeBeuf what nourishment he gave the patient for two weeks.

DR. LeBEUF: Modified milk.

DR. L. R. DeBUYS, of New Orleans: Dr. LeBeuf's case is very interesting. I have not had any experience with the Murphy drip

in cases of cerebro-spinal meningitis. I believe, however, that we must bear in mind in those cases where we have many of the symptoms that we get in cerebro-spinal meningitis that there is always a possibility of having the condition known as meningismus. I believe in doing a spinal puncture in all suspected cases of cerebro-spinal meningitis. There can be no harm done in this procedure, and we gain a great deal of knowledge from it.

DR. C. C. BASS, New Orleans: If I understand the essayist correctly, he did not make use of lumbar puncture in this case, and did not give the Flexner serum. I think it is well worth emphasising the fact that, of all serum treatments that are now established, the Flexner serum for cerebro-spinal meningitis seems to be about as well established as any, not excepting diphtheria antitoxin. It is so well established that I believe nobody should now treat a case of meningitis without, as soon as possible, determining whether or not it is meningococcic meningitis, and, if so, giving the patient the benefit of the serum treatment. Of course, the serum is not of service in any except the meningococcic variety of meningitis. It is possible, and highly probable, that the case the doctor dealt with might have been one of meningococcic meningitis, and might have been benefited by lumbar puncture or by the use of the Flexner serum, but that cannot be said or known unless lumbar puncture had been made to determine whether it was meningococcic meningitis or not. If this had been done, and the Flexner serum given a chance, it might have brought about an equally good result to that which he obtained by the use of the Murphy drip.

In the recent outbreak of meningitis that occurred at Lucedale, Miss., which received considerable newspaper notoriety, the very marked and striking beneficial effect of the anti-meningococcic serum was demonstrated. Not a single case of meningitis died after the serum was given. Three out of four died without the serum treatment, and three out of three lived with serum. That is in keeping with most of the reports on the use of the Flexner serum. Therefore, I believe it is important now that we should make the diagnosis of meningitis, determining whether it is meningococcic or not, and, if it is meningococcic, always giving the patient the benefit of the serum.

DR. J. B. ELLIOTT, JR., New Orleans: When I am called to a

case of cerebro-spinal meningitis I tap the spinal column immediately, and at once give the Flexner serum; then I go to the laboratory and try to find out the nature of the meningitis. You cannot do any harm by administering the serum, and it may do good. Dr. Bass will remember tapping the spinal column in one case twice, and the fluid which came out was quite thick. We immediately gave the patient the Flexner serum. This was a case of meningitis, epidemic in character. The serum did the child no harm. On second tapping the fluid was not quite so thick. As I have said, the first was thick, and after the administration of the serum the patient was temporarily better. It is my practice to tap the spinal column immediately in these cases, and then to give the serum as soon as possible. I do so believing that the administration of the serum can do no harm.

With reference to the Murphy drip, it is the best thing I know of. When I get a bad case of any kind I use the Murphy drip with black coffee, and when I say coffee I do not mean the average boarding-house coffee. I mean good coffee. I use three ounces in a half pint of normal salt solution, and I find it is the best thing I have tried in the bad or almost moribund cases. It is better than strychnia or anything else I have tried.

In another case we recovered a bacillus which we have not been able to cultivate or name. It was not the germ of epidemic meningitis. We then searched for tubercle bacilli, and could not find them. The patient died on the eighth day, and had a peculiarly high temperature, the whole attack resembling influenza.

DR. DENEGRE MARTIN, New Orleans: I have been asked by one of the members to say a few words in regard to the use of the Murphy drip in children. First, it is a difficult matter to retain the nozzle. I find the best thing is a medium-size catheter, held in with a piece of Z. O. plaster placed over the catheter and fastened to the thigh. Introduce catheter into rectum not more than two inches.

Second, the fluid is expelled if allowed to run in too fast or with too much force. Let it discharge at the rate of about 30 minims per minute, and at a height not to exceed four to six inches. Never remove catheter unless forced to do so, else it will irritate the rectum.

Orleans Parish Medical Society Proceedings.

President, DR. B. A. LEDBETTER.

Secretary, DR. L. R. DEBUYS.

141 Elk Place, New Orleans.

In Charge of the Publication Committee, DR. L. R. DEBUYS, Chairman.

DR. HOMER DUPUY and DR. W. H. BLOCK.

MEETING OF AUGUST 14, 1911.

DISCUSSION OF DR. ESHLEMAN'S PAPER.

DR. ESHLEMAN (in closing): I recall an interesting case of probable syphilis of the liver, upon which Dr. E. D. Martin did an exploratory laparotomy last winter. The patient was a colored woman about 38 years old in the Charity Hospital. She presented in the mid-epigastric region a rounded tumor mass which caused the abdominal wall to bulge considerably. It was the size of a large orange, not fluctuating, not nodular, but slightly irregular on the surface. I was certain it was connected with the liver, and expressed the opinion that it was a gumma, and suggested having a Wassermann and other blood examinations made. Dr. Martin, however, explored at once, and found a liver tumor which, from his description as to color, consistency, etc., I feel sure was a gumma. He did an omentopexy. Subsequent blood examination showed a positive Wassermann. Mercury and KI treatment was started. After two weeks the hospital interne told me the tumor seemed smaller. She left the hospital at that time for her home in the country. I feel certain the case was syphilis of the liver.

DISCUSSION OF DR. KOSTMAYER'S PAPER.

DR. CIRINO: It is not so easy at times to diagnose tubular pregnancy. You can have a normal condition existing, as far as the uterus is concerned, and may never know of an existing tubular pregnancy. My experience of a case of tubular pregnancy, for which I operated, was not diagnosed as such, but as a case of appendicitis, and it was only after the abdomen was opened that the pregnancy was discovered—in the tube.

DR. C. W. ALLEN: Dr. Kostmayer's very interesting paper brings to mind many points in connection with this condition. First, we must consider the pathology behind this trouble. It is due either to a congenital deficiency of the surface epithelium of the fallopian tubes at some point, with or without a slight dilatation, or a destruction of this epithelium, the result of disease. In either case the ovum is arrested in the tube, and fertilization takes place here. The symptoms at the time of rupture may vary according to whether inflammation is present, either the result of pre-existing disease or a result of the disturbance within the tube. The site of the fetus within the tube is also of consequence. It may lie at the fimbriated end, in the center of the tube, at the uterine end, or within the walls of the uterus. The nearer the uterine end, the greater the hemorrhage, and when the rupture is intramural the hemorrhage is most likely to be fatal before operation can be resorted to. The presence of menstrual disturbances, such as referred to, is the rule, but cases may occur without any apparent menstrual irregularities.

In cases I have seen, the presence of temperature has seemed to depend, as a rule, upon the existence of inflammation about the tube. We often see cases with subnormal temperature. I would consider sudden, sharp pain in the lower abdomen, with evidences of shock and a rapid, weak pulse, sufficient to make the diagnosis, regardless of the other symptoms mentioned. Such cases are not likely confused with ruptured appendices.

Regarding operation, the rule is to operate as early as diagnosed, but all rules have exceptions, and Dr. Kostmayer's case is one.

A practice I have found valuable in operating upon desperate cases, where it would seem that you could not get the patient off the table alive, is to have an assistant use Esmarch bandages on the extremities, driving the blood into the trunk. I feel that I have saved more than one life by this method.

DR. CHAVIGNY: The question of diagnosis in extra-uterine is one of importance, the operative treatment of cases in which an early diagnosis has been made, is, in a measure, very similar to removing a pyo- hydro- or hemato-salpinx. The hemorrhage in these cases should help us very materially in arriving at a proper conclusion.

I can recall a case which will show some interesting features

along these lines. Mrs. M., white, aged 24, came to New Orleans for the purpose of consulting a midwife to have a criminal abortion performed. After consulting the midwife she began to have hemorrhages, which continued for several weeks. She consulted me. After examination I concluded that she had particles of membrane remaining in the uterus, and advised a curettement, which I did with some benefit. Two months after returning home the patient had her physician to call me up over long-distance, telling me that she was having rather profuse bleeding. I advised him to keep her under observation for several weeks. Her condition did not improve, hemorrhages continuing. I suggested she be brought to the city. Upon examination I found a large mass on her right side, which, I must say, I did not take for an extra-uterine, but, nevertheless, advised laparotomy, as she was running no temperature. On opening the abdomen, much to my astonishment, I found a perfectly normal, living five-months' child, which I removed with the right appendage. As will be observed, hemorrhage was the predominant symptom, and I believe we will find this to be the case in a great many of our extra-uterine patients.

DR. KOSTMAYER (in closing): The paper has brought out so much more discussion than I expected that I am more than gratified. There were many phases of the question brought out that I did not have in mind when writing the paper. My purpose was merely to show that there were certain cases that should not be operated on at once. Cases not in active hemorrhage should be watched, under favorable conditions. No case of uterine hemorrhage should be curetted before ectopic gestation is eliminated.

DISCUSSION OF DR. ALLEN'S PAPER.

DR. PERKINS: Dr. Allen's very interesting and timely paper on the most recent improvements in local anesthesia is valuable and needed. There is too much disposition to carelessly try and discard any new technic, and such topics must be discussed from time to time to stimulate the intelligent and careful use of the best methods.

An important addition to the success of any method of local anesthesia is a razor-edge on the knife. Dull blades cause transmitted pressure on neighboring inflamed and non-injected areas, and preventable pain results. Since the ideal in all methods of

local anesthesia is to do the maximum of painless work with the minimum of drug, the use of knives which will cause minimum pain cannot be overlooked. I often use safety-razor blades for small incisions, and with them a single incision, swiftly and surely made, is sometimes less painful than a hypodermic injection.

DR. PAINE: Dr. Perkins refers to the use of a very sharp instrument for opening furuncles and small abscesses, and I just want to suggest that if a line is drawn just where the incision is to be made with a small camel's hair pencil dipped in pure carbolic acid, in two or three minutes sufficient local anesthesia will be produced to allow of the opening being made practically free from pain.

DR. ALLEN (in closing): Regarding the use of cocain to prevent shock when used for its effect upon the general nervous system, I would not like to state positively, but hardly think it would prove of use here. Spinal puncture gives one death to every 500 or 600 cases, if we accept the statistics from all sources; consequently when general anesthesia is contraindicated we should only employ it when local, regional or vein anesthesia cannot be used. Dr. Barker has made some very interesting observations, and his analgesic compound, which contains 5 per cent glucose, has much to commend it. The ability of certain European operators to invert their patients after puncture is probably due to their using an anesthetic fluid lighter than the cerebro-spinal fluid.

Communications.

LETTERS FROM FOREIGN LANDS. VIENNA.

To the Editors of the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL—In reply to your request for my impressions of Vienna as a place for post-graduate work, I do not feel competent to render an opinion except upon those departments in which I have worked.

The First Medical Clinic, presided over by Hofrat Professor Karl von Noorden, in which I was fortunate enough to secure an assistantship, is the great nutritional clinic of Europe. His writings are so well known that this clinic draws men from all

over the world, one meeting here colleagues from Italy, France, Japan, South America, and even Honolulu. This clinic is organized on almost a military basis, each member of the clinic having his particular task in connection with the routine ward-work, while each one is expected to undertake some "arbeit" or research work in connection with his clinical duties. What strikes one, at once, is the scientific basis upon which patients in this clinic are nourished. Instead of giving them mixed dishes, with doubtful chemical composition, each patient receives a weighed quantity of meat, chicken, eggs, butter, bread, etc., according to the indications, a complete record of same being kept in the bedside notes, the protein and fat being noted in black ink in one column, and the carbohydrate in red ink in another column. In this way, at a glance at the bedside notes, one is acquainted with the exact number of calories of protein, fat and carbohydrate which each patient has received during the previous twenty-four hours.

Four large wards make up the indoor clinic, while the outpatient department, "Ambulatorium," is housed in a small building in the courtyard, together with clinical laboratory. Each ward has a separate small clinical laboratory contiguous to it, and all examination of blood, feces, etc., are made here by the several assistants. Kjeldahl determinations of nitrogen, and the more complicated tests connected with metabolic work, are conducted in the chemical laboratory. By the opening of the Fall Semester, Professor von Noorden will have moved into a new and commodious building, especially erected for him according to his designs, so that the chemical laboratory will be adjacent to the wards.

It is impossible to give more than a cursory idea of this clinic, but a few months' service therein serves to thoroughly impress upon one the close relationship between medicine and pathological chemistry.

Weichelbaum's Pathological Institute is too well known to need any description, but one can imagine the vast amount of material to be seen here, with from eight to fifteen post-mortem sections daily. The private courses, however, conducted by Professor Weichelbaum's assistants, are most profitable to one seeking gross or microscopical pathology. The classes in gross pathology consist of five men, who are given to examine the organs from five different post-mortems. After an hour's time, which is necessary for each

man to examine all five trays, one of the assistants listens while each member of the class in turn demonstrates his particular set of organs. The assistant quizzes the demonstrator from time to time, explaining in full any errors which may be made. In this institute is housed, probably, the finest pathological museum in the world, but, in order to see it, one must look up the janitor, catch him when he is unoccupied (which is rarely the case), and fee him. This old fellow, who has assisted in 80,000 post-mortems, is familiar with and can demonstrate every specimen in this vast museum, so that one feels repaid for any enforced wait he may have had to undergo.

Microscopical pathology is taught to sections of ten men, in much the same manner as is gross pathology.

The Institute for Experimental Pathology and Serum Therapeutics is a recently-erected six-story stone-and-marble building, devoted entirely to animal experimentation, to preparation of vaccines and sera, and to experimentation along the latter lines. Here all anti-toxic sera and vaccins are made for Austria, and under Professors Paltauf, Kraus and Biedl, a large corps of assistants are continuously employed in research work, so that no better place can be found in which to learn the fundamental principles of vaccine and serum therapy, as well as the preparation of vaccines and sera. Supported by the Government, one doing research work has abundant material and all necessary apparatus. An idea of the great amount of work being done here can be judged from the annual expense for guinea pigs alone, which is \$3,000 a year. One contemplating experimental work upon animals, therefore, cannot find a more desirable or pleasanter place in which to work, and nowhere will he meet such uniformly pleasant and courteous colleagues.

From the little I saw of the surgical work I would advise all surgeons contemplating post-graduate work to remain in America, as our surgical clinics are certainly far superior in equipment, technique and material.

The eye and ear clinics are, however, I understand, excellent, and furnish an abundance of clinical material, with courteous and energetic teachers, most of whom speak English, so that these clinics are more patronized by Americans and Englishmen than any of the other clinics with which I have come in contact.

In this connection, I would advise anyone contemplating study in Vienna to learn German, as there is no doubt that, without it, one cannot secure the best advantages, since some of the best teachers, notably those in pathology, are unable to speak our language. In addition, the clinical records being all in German, it is naturally impossible for one unfamiliar with the language to get in close touch with the clinical work.

One of the greatest attractions of Vienna, as a place for post-graduate study, is due to its geographical situation, being surrounded on three sides by high mountains, with the Danube on the fourth side. When one feels the effects of overwork, a complete relaxation is to be found in climbing the surrounding mountains, the base of which can be reached in half an hour's ride on the electric railroads, or perhaps by a trip up or down the Danube, one of the most beautiful rivers in Europe, and considered by some superior in artistic and historical scenery to the Rhine. Very truly yours,

ALLAN C. EUSTIS.

September 8, 1911.

EUROPEAN NOTES.

GENTLEMEN—Believing that I had gathered enough gossip to put an old spinster to shame, it was my intention to write to you a fortnight ago, but I concluded to put it off a little longer and write to you during a short vacation which I am now enjoying in the Alps and Italian lakes preparatory to a sojourn in France and England.

With but little time at my command I did not think it advisable, on my arrival in Europe, to shift from one place to another, or run the whole gamut of medical centers in search of suitable work. The work in Berlin suited me, and I remained there, not because I thought it the only place to get good work, but because I happened to go there first and found just what I wanted. Shorter stays at Vienna and Munich convinced me that excellent work was to be gotten at either place. By carefully mapping out my itinerary I find that I have still four weeks to spend in Paris and London, and expect to be able to get quite a little work in that time in these two centers. If conditions there are as pleasant and profitable as they have been in Germany and Austria I shall have no cause to

complain, and there should be no reason why one should go so far on the continent for new ideas and methods. But I doubt it, for, if such is the case, Berlin and Vienna would not draw men from all English and French-speaking countries of the world as they now do.

The presence of so many foreign medical men in these cities (most of them unable to speak or even understand German) has convinced me more than ever of the value of this language to the progressive doctor. My wonder is that American universities have not realized this fact and raised the unit value of German above all other foreign languages.

German is necessary if one wishes to keep abreast of the time in medical literature, and, however strange it may seem, the greatest number of the leading medical men of Germany and Austria neither speak nor understand English, and are apparently making no efforts to do so. To one who has been among them for even so short a time, the reason for this indifference is obvious. The German medical journals contain such excellent abstracts of all scientific work done throughout the world that there is little necessity for his learning any foreign language. These abstracts are not short synopses, as are sometimes found in a few of our current medical journals, but they are lengthy and can always be depended upon to give the exact meaning which the author of the original article intended to convey.

* * * *

While in Berlin my attention was called to the International Hygienic Exhibit at Dresden, and on my way to Vienna I stopped there to look it over. The exhibits from England and Germany (especially the former) were unquestionably good, and some features from these buildings, as well as others, may be of interest.

From the Manchester laboratory, in the British building, was a guinea pig inoculated subcutaneously with milk from a tuberculous cow and sacrificed eighteen days later. This animal showed undoubted tubercular lesions in many lymphatic glands, especially those of the cervical region and of the mesentery. No mention was made as to whether the cow was free from tuberculosis of the udders. As it should be presumed that, as no mention was made of it, the animal must have been free from disease of these parts, the observation would seem to settle the long-disputed question of

the transmissibility of tuberculosis to the human subject by this source.

The section on sleeping sickness and tick fevers in man and beast was very instructive.

The German building was, as should be expected, the largest, and its exhibit quite complete. The entire building was devoted more especially to physiological phenomena, illustrated by means of ingenious apparatus, and was evidently intended more for the education of laymen than for the information of the medical man. The mounted anatomical and (few) pathological specimens in various preserving fluids were beautiful.

In a remote corner of the Japanese building was found the following: That *Anopheles sinensis* had also been found capable of transmitting malarial fevers. The other exhibits were fair, but not remarkable; the prevailing sense of "greatness" and "showing off," coupled with lots of advertising, was too prominent, and marred or veiled the motive of the exhibit.

I could find no exhibit from the United States.

Although I found great interest at Berlin manifested in the work now being done at Tulane, and received many inquiries regarding the university, its several heads and its future, it was in Vienna that I received the most cordial and flattering reception on account of Dr. Duval's work on leprosy. The far-reaching influence of his work is being appreciated here more than at any other place that I have yet been to, and Dr. Krause, head of the Imperial Biological Laboratory, showed me every consideration. Dr. Krause and an assistant are now at work confirming Dr. Duval's findings, and, from what has already been done, it is safe to say that his work has already been confirmed there.

Dr. Krause is a charming man and an enthusiastic worker. With these excellent traits he has been able to gather around him a fine lot of assistants, not the least of them being our own Dr. Eustis. Dr. Eustis has been doing splendid work in Vienna, and some publication which will shortly appear from him promise to be a credit to him and to the university.

Prof. Halsey is still in Vienna and hard at work on two gigantic undertakings, which he tells me will shortly be completed.

Solon Wilson, Dr. Butterworth's new assistant, is also in Vienna working hard in the baby clinic.

Besides those mentioned, there are a number of others from home, and Tulane is well represented wherever one goes.

There is a movement on foot in Vienna which, if carried through, will be far-reaching and of untold benefits to the whole world. The object of this movement is to study epidemic and endemic diseases afflicting countries in an international laboratory erected for that purpose, and to send thoroughly competent and well-organized commissions to such places when the necessity arises. Governments and universities will be asked to send men to study the diseases afflicting their respective communities. Although organized by leading European scientists, the project is to be an international one, and influential and moneyed men of both continents have already been asked to co-operate. Plans are already well under way, and several governments have already endorsed the idea and have agreed to help it with prestige and funds.

The governing board, or commission in charge, is to be made up of medical men of international reputation, and, if I have correctly understood my informant (a very influential man, both in Europe and America, and an organizer of the scheme), there is a bee humming around the bonnet of a New Orleans man to serve as a member of this board.

Faithfully yours,

M. COURET.

Stress, Italy, July 29, 1911.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

The Southern Medical Association Meeting.

The Southern Medical Association will hold its next meeting at Hattiesburg, Miss., November 14, 15 and 16. The success of the last meeting in Nashville should assure a goodly gathering this year, and the JOURNAL is noticing the meeting this early in order that those interested may plan to attend.

The purposes of the Southern Medical Association have not yet been made clear to Southern physicians, but so long as this body stands for a distinct organization of Southern men it must succeed.

The National Body is too big and its momentum too great for any consideration of the Southern or any other sectional interest, and the section must look after itself.

At each meeting of the Southern Association emphasis has been laid upon the importance of getting together, and a representative body from all of the Southern States can do more to that end than the several individual States may do. Every day a new problem in sanitation, education, or in State or municipal health matters arises, and until now no concert has obtained in meeting these.

The interest of one State and another is common in questions of sanitation, where the one endangers the other. The growing prevalence of pellagra, the increasing interest in hookworm disease, the general agitation over the Owen Bill and its far-reaching influences, the progress in advanced medical education, the study of epidemics—all are common ground for work, and the Southern Medical Association should debate all such questions.

The next number of the JOURNAL will print the program of the meetings and announce the arrangements for the same.

The Medical Department of the University of Tennessee.

In the September issue of the JOURNAL, under the caption of "*A Notable Merger*," editorial notice was given to the amalgamation of the University of Tennessee and the University of Nashville with Vanderbilt University in the Medical Departments of these institutions. This editorial was based upon a lengthy news article published in one of the Nashville papers, and also briefly noticed in the New Orleans papers. The said article published the personnel of a new faculty of the combined institutions, and the JOURNAL accepted the press statement as one of fact.

It seems that the newspaper statements were without foundation, and the JOURNAL takes this opportunity of correcting its own notice, upon the authority of President Brown Ayres, of the University of Tennessee, and Mr. E. F. Turner, Registrar of the Medical Department of the same university.

We are authorized to state that there has never been any action of the Board of Trustees of the University of Nashville or of the Board of Trustees of the University of Tennessee looking to any kind of merger with Vanderbilt University in any of the departments of this institution. On the other hand, the Board of Trustees of the University of Nashville, by formal action, transferred all of the equipment of the Medical Department of the University of Nashville to the Board of Trustees of the University of Tennessee, which had been operating with them for two years a joint Medical Department of the two universities at Nashville. Further, the Board of Trustees of the University of Nashville has formally transferred to the Board of Trustees of the University of Tennessee its good will and the authority to claim the Medical College to be operated by the University of Tennessee as the successor of the Medical Department of the University of Nashville.

The merger of the University of Nashville and the University of Tennessee is due to the fact that both are State institutions, the ownership of the property of each being, through the Boards of Trustees appointed by the Legislature, in the State itself.

The University of Tennessee, in carrying out its plans for the development of its Medical Department, has secured the property of the College of Physicians and Surgeons of Memphis, and has absorbed that institution into its own College of Medicine. So

that the College of Medicine of the University of Tennessee, to be hereafter operated at Memphis, is the legal, and only legal, successor of the Medical Department of the University of Nashville and the University of Tennessee, heretofore operated at Nashville, and of the College of Physicians and Surgeons, heretofore operated at Memphis.

The only possible basis for the statement of the connection between the formerly existing joint Medical Department of the University of Nashville and the University of Tennessee and Vanderbilt University is the fact that a few of the former faculty of the joint medical school have been taken into the faculty of Vanderbilt University.

Much of the above statement is derived from the authoritative information furnished by the President of the University of Tennessee, and the JOURNAL trusts that its readers will find a full correction of any former statement made in its columns and will, as the JOURNAL does, wish the new College of Medicine of the University of Tennessee a continued success in its new location.

Statistical Nosology.

For over a hundred years the science of nosology has been cultivated by the medical profession, and as far back as 1853 the first statistical congress was held in Brussels, at which a commission was appointed to prepare a classification of diseases that might be used in all countries for the statistics of the causes of death.

In 1855 their report was adopted in Paris and the classification was revised in 1864, 1874, 1880 and 1886. After the later revision it was adopted by the International Statistical Institute. The first decennial revision was made in 1900 and the second in 1909. And now it is the international list for a large number of countries in force for the decade from January 1, 1910, to December 31, 1919.

This international list of causes of death shows a rapid progress of classification. While up to 1893 no two countries used exactly the same methods, and this lack of uniformity rendered the results incomparable, by 1900 a large number of countries were represented in the International Commission, and by 1907; Dr. Bertillon estimated that the system was in effect for more than 212 millions of people—a conservative estimate. Since then a very important

accession has been that of the whole British Empire, and it is hoped that by 1911, the date of the third decennial revision, all countries will have joined the movement.

It is not claimed that the International List is exactly a proper scientific nomenclature, but it is an eminently practical working list. Satisfactory statements of causes of death can be obtained only by means of co-operation between members of the medical profession and the registration authorities. The blanks employed for the statement of the causes of death should be uniform, and it is advisable that the United States Standard Certificate of Death, as recommended by the American Public Health Association and approved by the Bureau of the Census should be generally adopted.

Tropical Medicine at Tulane.

New Orleans is beginning to come into her own, in so far as the teaching of tropical medicine is concerned.

In the Undergraduate Department of Tulane a chair of tropical medicine, hygiene and preventive medicine has been created and will be filled by the well-known authority on tropical diseases, Professor Creighton Wellman, for the session beginning this month. It is hoped that some large endowment may be obtained in order that the subject may be developed further by 1912.

The Post-Graduate Medical Department has combined the teaching of tropical medicine with clinical microscopy in charge of Professor W. H. Seemann, a pupil of the Liverpool School of Tropical Medicine. As an expansion of the work, Professor Archinard will during each term lecture and show cases illustrating the nervous affections found in tropical diseases; Professor Storek will present such tropical diseases as involve the digestive system, and Professor Ménage will discuss the exhibit cases of tropical diseases of the skin.

There is an abundance of material here and New Orleans is the logical point for the teaching of tropical medicine in this country. The JOURNAL has several times animadverted upon this subject and it looks as if its contention is to be realized.

Salvarsan.

The literature on the various phases of the treatment of syphilis with Erlich's remedy is receiving constant and numerous accessions. That we are far from knowing all we might on the subject is shown

by the widely divergent views expressed by different observers and by the changes in opinions and technique which are so frequently recorded even by many of the enthusiastic advocates of the method.

The consensus of opinion is still that the remedy is the most rapid in immediate effects, but instances of relapse after large and even repeated doses are not infrequent.

The favorable effects produced in a few cases by the serum of individuals that have been dosed with "606" may tend to indicate that the remedy belongs, after all, to the biologic instead of the chemic family. The effects of the milk of salvarsanized mothers on syphilitic infants would point the same way if the observation of some relating to the absence of arsenic in said milk is correct, but some one else claims to have found arsenic in such a case.

Time *alone* will tell.

Abstracts, Extracts and Miscellany.

Department of Internal Medicine.

In Charge of DR. E. M. DUPAQUIER, New Orleans.

NOTES ON PRACTICE.—The occurrence recently in the writer's practice of a case of protracted fever, in a young Hindoo, 18 years old, having come here directly from Hindoostan by way of New York, where he first felt sick, three months ago, prompted some reading on the subject of Malta fever. While the investigation led to the elimination of the diagnosis Malta fever, first, because the clinical characteristics were wanting, and, second, because the blood examination proved it to be a case of typhoid fever, with severe anemia, no leukemia, no malaria, yet it resulted in finding out, in a recent article, that methylen blue had been suggested in the treatment of Malta fever. An occasional facetious criticism of crude methods of drug therapy, such as onion *feeding* for dropsy and of bloated results with so-called popular medications, modified *ad libitum* to fit in current ideas, does not blur the view and serious consideration of suggestive clinical experimentation in drug therapy, such as the trial of methylen blue in Malta fever.

Serres (d'Olais) prescribed, in the man, for dropsy absolute rest and three platefuls of milk soup, a day, to be followed each time by the eating of *one* white onion with a little salt and bread. This is not shocking. It is quite acceptable, nowadays. It indicates care and refinement in the art of prescribing. The popular medicine man, the herb vender, prescribed for dropsy FEEDING on onion (*sic!*) Hence, the rebuff. Now, as to methylen blue for Malta fever. Quoting Musser-Kelly's up-to-date text-book on treatment (page 703):

"Malta fever itself defies all kinds of treatment, which is entirely symptomatic and empiric. No drug at present known has the property of modifying the power of the bacteria in the system. The disease must run its course, until the cells and body juices have destroyed the micrococci and eliminated their toxic products. The principal object of the treatment, therefore, is directed to keep the patient's strength up by proper rest, nursing, etc." * * *

Remarks.—Most text-books, nowadays, with the rapid growth of clinical work the world over, must necessarily become stale, in many parts, by the time they go to press. Therefore, to be posted, one should read a substantial monthly.

Quoting *Le Journal Médical Français, journal des Facultés de Médecine Française*, that is one of them, sure enough (page 478) "*Traitement de la Fièvre de Malta par le bleu de Méthylène.*—Audibert and Rouslacroix in the treatment of two cases of Malta fever, duly reported, thought of resorting to methylen blue for the following reasons:

"1. It is, above all, a parasitotropic drug, therefore not injurious to the body cells.

"On the one hand, it diffuses rapidly in the organism, for its presence in the urine can be detected fifteen minutes after its absorption. On the other hand, its presumed action ought to last during quite a while, since, in the normal, elimination lasts from thirty-five to sixty hours.

"3. Its antiseptic action is evident, since it checks the development of the *Bacillus anthracis* and of the gonococcus, after a prolonged contact.

"4. Finally, it is a powerful analgesic. Why not, then, try to use such precious properties in Malta fever, a long, tenacious microbial disease, with painful symptoms, arthralgias, etc.?"

The two cases reported by Audibert and Rouslacroix were markedly improved. A striking fact was the lowering of the temperature. The course of the disease was checked. Shall the pessimistic call it again coincidence or psychic effect, when, as a control, methylen blue was used in cases of fever of various kinds with no effect at all?

Administration by mouth, dose 0.10 to 0.15 in twenty-four hours, in konseals of 0.05 each. Should the stomach rebel, the blue must

be mixed with lactose 0.25, per dose. Should vomiting persist, administration by needle, 0.05 per 1 cubic c., twice or thrice daily.

The drug is innocuous. Impurities and acidity of the blue are the causes of the gastric symptoms mentioned, but these are unimportant. Yet it is necessary to use only guaranteed c. p. methylen blue.

Department of Surgery.

In Charge of DR. F. A. LARUE, New Orleans.

SEVERED TENDONS AND NERVES OF THE FOREARM.—Mr. Vallas (*Revue de Chirurgie*, May 10, 1911) presented before the Société de Chirurgie of Lyons, a young man, *aet* 18 years, whom he has attended to, six months prior, for a wound of the forearm above the wrist, partially involving the joint and severing the radial artery, the median nerve and the external portion of the flexor sublimis digitorum.

Vallas, contrary to the classical method, simply closed the articular capsule with a few catgut stitches, approximated the middle aponeurosis, the superficial aponeurosis and the skin. Although the nerves and cut tendons were not sutured, the functional result is excellent, both as regards the nerves and tendons.

Vallas thinks that the sutures generally used in such cases are a hindrance to normal cicatrization. One should merely reconstruct the sheaths permitting nature to reunite the enclosed organs.

SUBPHRENIC ABSCESS OF APPENDICULAR ORIGIN.—Mr. Bérard (in *Revue Chirurgie*, May 10, 1911) communicated to the Société de Chirurgie of Lyons four such cases. Three of them followed suppurative appendicitis, either through the lymphatic route or directly by the ascent of pus.

The fourth case developed in a young man, *aet* 25 years, after an acute appendicitis, which attack was controlled in three days by diet and ice bag.

The general condition, however, did not improve. Fever continued dyspnea appeared with an enlargement of the base of the chest and diminished thoracic vibrations.

Exploring with needle revealed pus, followed by trans-plano diaphragmatic drainage.

The infection had been conveyed through the retro-colic lymphatics as shown by an appendectomy, two months later, when not a vestige of intraperitoneal abscess was found.

Department of Ear, Nose and Throat.

In Charge of **DRS. A. W. DEROALDES** and **CLYDE LYNCH**, New Orleans.

ACCESSORY THYROID TUMORS OF THE TONGUE.—H. E. Smith reports three very interesting cases observed by himself and reviews 64 others, the sum total up to this time. In most instances the condition is found accidentally by some incident that may attract attention to the throat. As a rule the patient then complains of sensation of the foreign body in the throat, some cough, some dysphagia, slight huskiness to the voice, especially after being used for some time. The tumor appears usually just behind the large circumvallate papillæ and extends down to the tip and lingual face of the epiglottis about the size of a hickory nut, smooth on its surface, which is covered with normal mucous membrane continuous with that of the tongue. Tumor is usually firm to the touch and of a darker color than the normal membrane and covered with blood vessels. These tumors cause no inconvenience except the knowledge of their existence.

In discussing the etiology of these tumors the author writes: "In vertebrates the thyroid gland consists rudimentarily of three parts, one mesial and two lateral. The former is derived from the primitive mouth cleft which grows downward as a fold through the approximation of the mesial end of the second branchial arch with that of the third and tuberculum impar. This fold, as the neck extends and the large vascular trunks descend, become transformed into a tube the lower blind end of which is capable of producing thyroid gland tissue; thus the ductus thyroglossus passes from the isthmus of the thyroid to the foramen cecum at the base of the tongue and normally is obliterated."

Little is known concerning the development of the lateral germs,

but it is possible that its development depends upon the normal development of the median germ, thus accounting for the fact that when the one fails to develop the other does likewise. It is to be noted, also, that the thyro-glossal duct may retain the power of producing thyroid tissue at any part of its course, the vicinity of the foramen cecum, at the base of the tongue, being a favored site, and this may occur even though the lateral germs are developed, but much more likely when the isthmus and the lateral masses are wanting, thus explaining these tumors in the absence of the normal gland in the neck.

Dr. Smith draws his conclusions as follows:

- (1) That accessory thyroid tumors of the tongue are more common than has been generally supposed.
- (2) That they result from nature's effort to supply a physiological need.
- (3) That they frequently require no treatment and should be considered simply as a misplaced thyroid gland.
- (4) That care should be taken to ascertain the presence of some other source of thyroid secretion before removing radically.

Charity Hospital Bulletin.

In Charge of DR. J. A. DANNA, House Surgeon.

CONGENITAL ABSENCE OF LEFT HALF OF TRANSVERSE COLON, DESCENDING COLON, SIGMOID FLEXURE, AND UPPER RECTUM—RIGHT INGUINAL COLOSTOMY EIGHT DAYS AFTER BIRTH—DEATH SIX DAYS LATER.—Jos. Greco, aged eight days, was brought into amphitheater of the Charity Hospital with a history of vomiting for six days and no bowel movement since birth.

Child was in a semi-comatose state, somewhat cyanosed, cold, respiration rapid and labored, pulse rapid and of low tension. The abdomen was very much distended, tense, showing distended coils of intestine beneath. Vomited every few minutes a dark, fecal material.

Rectal examination showed normal anus, and normal rectum for three inches, at which length there seemed to be a valvular obstruction. Injection of water per rectum showed capacity about $1\frac{1}{2}$ ounces. Finger could not pass beyond obstruction, nor could metallic or rubber catheter.

It being found impracticable to do anything per perineum, it was decided to open the abdomen, and the distension being so great and the child so depressed, it was deemed best to do nothing more than the making of an artificial anus. There was no way of telling just what the malformation was, but it was judged to be in the higher rectum or lower sigmoid. A left inguinal colostomy was therefore decided on. A left McBurney incision was made of about one inch in length and the finger introduced for exploration and to find and deliver the sigmoid.

No sigmoid was found. In its place was a dense cord, the size of a lead pencil, which followed the course of the large bowel from the median line, where it ended in the very largely distended right half of the transverse colon, transversely across to the splenic flexure, down along the course of the descending colon, across the brim of the pelvis and down into the pelvis, where it ended in the upper blind end of the three inches of rectum, which was fully developed.

It was plain that nothing in the way of a colostomy could be accomplished on the left side, so a similar incision was made on the right side, the distended cecum delivered, two sutures passed through the abdominal incision and behind the cecum so as to anchor it, then tied, and an opening immediately made in the protruding bowel, which was followed by the discharge of quite a quantity of the same dark fecal material that the child had been vomiting for six days.

The left-sided incision was closed, and, owing to the traumatism of the blind end of the rectum in examination and exploration, a large gauze wick was inserted to guard against peritoneal infection from this source.

Two ounces of normal saline were now given subcutaneously, and the child put to bed and surrounded by hot bottles. Improvement in the general condition and amelioration of all the symptoms was almost immediate, and continued for four days, when signs of sepsis and toxemia began to show themselves. Child became list-

less, took nourishment poorly, had some temperature, and died August 27, 1911, six days after operation.

Autopsy showed absence of the left half of the transverse colon, of the descending colon and the sigmoid and upper rectum. Some distention of the ascending and right half of the transverse colon. The intestines about the blind end of the rectum were inflamed and adherent, and end of rectum found gangrenous and perforated.

The rectal pack was removed on the second day after operation without my knowledge, it being intended to stay there until all danger of peritoneal infection from that source had been eliminated. This probably contributed to the fatal termination, which was probably mainly due to autointoxication from absorption of the products of decomposition in the ascending and transverse colon, which were not well drained by the cecal colostomy.

INTUSSUSCEPTION DUE TO INTESTINAL POLYPUS.—*Charles Franice*, four years, M. August 10, 1911. On the day of admission the child ate some pie at about 11 A. M.; by 1 P. M. he was suffering with intense abdominal pain, and vomited. Blood was passed per rectum, but no feces. He only vomited once. Enemas failed to make the bowels move. He came to the hospital on the night of August 11.

Examination: Child is very restless, and tosses from one side of bed to the other. There is a large, oblong, doughy mass extending down the left side of the abdomen, from the costal arch into the pelvis. About two inches from the anus, inside the rectum, is a soft conical mass; the finger can be swept around the mass without meeting any obstruction. At the apex of mass is a distinct depression. Child's general condition poor. A diagnosis of intussusception was made, and child prepared for immediate operation.

Operation, August 11, 1911, A. M. Dr. Danna did a laparotomy, through the median incision from umbilicus to pubis. An intussusception was found, beginning six inches below the cecum; the cecum and many inches of small intestine having prolapsed into the colon. There were no adhesions, and the intussusception was reduced manually. Where the invagination began, a mass as large as a pigeon egg was palpated; the intestine was incised opposite to its attachment, and a polypus was discovered in the ascending colon, on the wall opposite the attachment to abdominal wall, and about

four or five inches from the ileo-cecal valve. The pedicle of the polypus was ligated and polypus excised. The intestinal incision and abdominal wound were closed in the usual manner. The operation was completed in fifty minutes. Anesthetic well taken, and patient doing well when he left the table.

Microscopical examination showed the growth to be a papilloma. The patient reacted from the anesthetic, but toxemia was marked, and condition gradually grew worse. Died that night. Autopsy not permitted.

Medical News Items.

THE HARRISON COUNTY MEDICAL ASSOCIATION met in Gulfport, Mississippi, September 13, and had a very interesting meeting. A committee composed of Drs. Hood, Folkes and Parker was appointed to draft resolutions on medical legislation.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION.—Plans are being perfected for the meeting of this association in Nashville, October 17, 18, 19, 1911. The local arrangements are in the hands of Dr. John A. Witherspoon and an able committee. The general sessions, the surgical section and the exhibits will be held in the Young Women's Christian Association building and the meetings of the medical section in the assembly room of the Hermitage Hotel. This hotel will be headquarters for the association. The association has adopted a permanent lapel button which bears a medallion of Dr. Ephraim McDowell. The name of the association in blue and gold and a white cross makes a very attractive design. The association was originally the Tri-State Medical Society of Kentucky, Indiana and Tennessee, but the scope of its activities was later enlarged, and while its name is of the valley, it embraces in its membership men from the Atlantic to the Rockies. A number of Southern doctors are on the programme for the Nashville meeting.

DEDICATION OF THE DANIEL BAUGH INSTITUTE OF ANATOMY AT THE JEFFERSON MEDICAL COLLEGE OF PHILADELPHIA.—This dedication took place on September 26. Dr. Samuel D. Gross and Dr. J. Chalmers DaCosta delivered the addresses at the opening of the

eighty-seventh annual session of the Jefferson Medical College on September 25.

U. S. GOVERNMENT POSITIONS.—The Civil Service Commission announces an examination for vacancies as they may occur in the position of pathologist and bacteriologist in the Bureau of Science, Manila, P. I., at a salary of \$2,000 per annum. It will not be necessary for applicants to appear at any place for examination. Their eligibility will be determined upon the evidence furnished in connection with application and examination (Form 2) concerning their education, training, experience and fitness. Applicants may, if they desire, submit with their applications copies of theses or publications which have been prepared by them.

Qualifications: The qualifications desired for applicants for these positions are as follows:

(a) That they be graduates in medicine. It is preferred that they shall have received a doctor of philosophy degree or have had an equivalent training from a first-class institution.

(b) They must be trained in bacteriological laboratory work and must have good technique.

(c) They must have a good thorough fundamental knowledge of pathological anatomy.

(d) They must have a knowledge of and training in immunity and serum therapy.

(e) They must be young, healthy and energetic, and capable of doing research work; in fact, they should have all the qualifications needed by a first-class laboratory research worker.

Each applicant for these positions will be required to submit with his application a photograph of himself, taken within the past three years, as a means of identification in case he receives appointment. An unmounted photograph is preferred. The name and date of examination, the competitor's name, and the year in which the photograph was taken should be indicated on the photograph. Applicants must have reached their eighteenth but not their fortieth birthday on the date of examination.

Examination for trained nurses will be held on October 18. The contract period is for two years and the salary \$50 per month for the first six months, with increase at the end of six months if found satisfactory. Promotions are possible with the increase to \$70,

which may be increased at the rate of 10 per cent. per annum until a maximum of \$85 is attained. Twenty-eight days' leave of absence is allowed. The examination covers anatomy, physiology, hygiene in the sick room, general surgical and obstetrical nursing and nursing experience. Applicants must be graduates of recognized schools and hospital experience in connection with tropical diseases will be given special credit. Applicants must be over twenty and under forty on the date of examination. Information may be obtained from the Bureau of Insular Affairs, War Department, Washington, D. C.

THE UNIVERSITY MEDICAL COLLEGE OF KANSAS CITY, MISSOURI, RESUMED.—This institution formally announced its disbanding early in the summer, but we are now advised that a reorganization has taken place by which clinic course for the junior and senior years are to be undertaken. Students will be received from recognized schools and the new management promises a school of high order.

“BULLETIN” COMPLETES FIRST VOLUME.—*The Bulletin* of the Shreveport Medical Society completed its first volume with the September issue, having published twelve regular editions and two State Society specials. The JOURNAL extends its congratulations.

HOTEL DIEU GRADUATES NURSES.—Five trained nurses of the class of 1911 of the Hotel Dieu held their graduation exercises last month. The sisters in charge of the hospital, Dr. Marion Souchon, house-surgeon, Dr. M. E. Brown, resident physician, and the nurses, were the only ones present during the exercises. The principal address was made by Dr. E. S. Lewis. The graduating class was composed of the Misses Henrietta Milliett, Goldie Back, Josephine McLaughlin, Nellie Cowart and Bertha Booske.

HOSPITALS WANT DUTY-FREE LEMONS.—A letter has been sent to every hospital in the United States advising it to send a request to the Senator of the State that he vote for free lemons when the free list bill comes up before the Senate.

HOSPITAL DEDICATED.—On September 5 the Elliot Memorial Hospital of Minneapolis was dedicated by the regents and medical faculty of the University of Minnesota.

PERSONALS: Dr. W. H. Seemann, who has spent the summer in Colorado, will return October 1.

Dr. M. A. Shlenker, who has been in Europe for several months, has returned and will limit his practice to diseases of women and midwifery.

Dr. E. M. Hummel has returned from his vacation spent in the West.

Dr. Philip Asher, dean of the New Orleans College of Pharmacy, attended a meeting in Boston of the American Conference of Pharmaceutical Faculties.

Dr. A. R. Holcombe has been elected mayor of Jackson, La.

Dr. Cosby Swanson has gone to Atlanta, where his practice will be limited to diseases of the skin.

Dr. Creighton Wellman arrived in mid-September to prepare for the course in tropical medicine at Tulane.

REMOVALS: Dr. A. G. Maylie, from New Orleans to Mandeville, La.; Dr. W. K. Evans, from Roosevelt, La., to Lake Providence; Dr. W. A. Fletcher, from New Verda, La., to Elton, La.; Dr. G. H. Setzler, from Hamburg, Ark., to Crossett, Ark.; Dr. C. C. Crawford, from Creston, La., to Bienville, La.; Dr. J. C. Parrott, from Many, La., to Moreauville, La.; Dr. J. E. Garrison, from Antrim, La., to Donner, La.; Dr. Henry Buck, from Red Fish, La., to Kinder, La.

MARRIED: On September 2, Dr. J. C. Sartor and Miss Lita Green, both of Rayville, La.

On September 4, Dr. Barnard Holt, of Duncan, Miss., to Miss Brooksie Jeffreys, of Hushpuckena, Miss.

The marriage of Dr. E. P. A. Ficklen to Miss Beatrix Kennedy Nott took place on September 5, 1911.

TULANE NOTES.

In the Post-Graduate Department (Polyclinic) Dr. W. D. Phillips has been elected demonstrator in charge of the work of gynecology on the cadaver, to succeed Prof. C. Jeff Miller, who resigned his chair in this department to accept a chair in the undergraduate department as announced last month. Dr. Phillips served as Professor Miller's assistant for several years and gained experience in that manner.

Judging by the numerous letters and inquiries received, attendance in the post-graduate department should be large at the session opening October 16.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of respective publications. The acceptance of a book implies no obligation to review.

A Manual of Diseases of the Ear, Nose and Throat, by JOHN JOHNSON KYLE, B. S., M. D. Third edition, revised and enlarged. P. Blakiston's Son & Co., Philadelphia, 1911.

A manual of this kind is especially useful to the general practitioner and short-course post-graduate student, who is enabled to profit by the author's ability to condense so much in this little volume. Dr. Kyle has maintained the same excellence in this edition that has characterized the former two, and the work is thoroughly up to date. DER. AND L.

Principles and Practice of Modern Otology, by JOHN F. BARNHILL, M. D., and ERNEST DE WOLF WALES, B. S., M. D. Second Edition. W. B. Saunders Company, Philadelphia and London, 1911.

This is one of the books that should be studied carefully by every working otologist, deserving much more time than a reading. The illustrations are especially fine, and add much to the value of the edition. Both author and publisher are to be congratulated upon the manner of their production.

Special mention is to be made of the chapter on the examination of the function of the ear, which has been entirely rewritten, and now contains the description and formula of a uniform system of tests accepted by the Eighth Otological Congress at Budapesth in 1909.

The operative surgery of the facial nerve, too, has been added to this edition, as have a description of the Heath operation and several additional paragraphs on the symptomatology, pathology and surgical treatment of labyrinth suppuration. DER. AND L.

Diseases of the Nose, Mouth, Pharynx and Larynx, by ALFRED BUCK, M. D (Berlin). Translated by F. W. FORBES ROSS, assisted by FRIEDRICH GAUS, M. D. Rebman Company, New York.

This work of Dr. Buck, which is so ably translated by Mr. Ross, differs in many respects from the usual publications of the present time. It is clear-cut and to the point in every way.

The paragraphs devoted to anatomy and differential diagnosis are especially clear. Treatment is fairly fine, but one wonders why the tonsil and septum have been so slighted, especially since both are receiving and deserving so much attention at the present time.

We must express much appreciation for the section devoted to diseases of the mouth. This is the first time, so far as we know, that this special region has received recognition in a work of this kind. Its anatomical position, its diseases, their pathology and treatment, directly concern the nose and throat specialist, and should be of paramount interest to him, as well as to the student and genral practitioner, who may now have a ready reference for conditions involving this locality.

The print is clear, the work charming to read, and can be heartily recommended to all students of these diseases. DER. AND L.

Medical Electricity and Röntgen Rays, by SINCLAIR TOUSEY, A. M., M. D.
W. B. Saunders & Co., Philadelphia and London.

No work has yet appeared which can compare with this, either in comprehensiveness nor in detail or style.

The author takes nothing for granted, but from the first page of the text clearly and minutely presents each phase of the subject with a particularity that is worthy of the appreciation of every one who is privileged to peruse the book.

The introductory chapters define electricity and its various forms, and no phase is omitted. The knowledge thus imparted is then applied, and everywhere a clear text is made more lucid by well-arranged illustrations, many original. It would be impossible to select any one division of the book for particular mention—suffice it to say that the pages (over 1,000) carry a complete and exhaustive treatise on the subjects discussed, in which no pains are spared in bringing forward all there may be to say in each topic. More than this, the book is replete with references to the work of others, and in all debatable questions all sides are presented. This work must stand for a long time as a reference for all workers and students in the field of electro-therapeutics and radio-therapy.

DYER.

Publications Received.

LEA & FEBIGER, Philadelphia and New York, 1911.

A Manual of Materia Medica, by E. Quin Thornton, M. D.

Diseases of the Stomach, by Chas. D. Aaron, Sc. D., M. D.

Progressive Medicine, edited by Hobart Amory Hare, M. D., and Leighton F. Appleman, M. D.

WILLIAM WOOD & CO., New York, 1911.

A Manual of the Diseases of the Eye, by Chas. H. May, M. D. Seventh edition.

MISCELLANEOUS.

Thirty-fourth Annual Report of the Board of Health of the State of New Jersey, and Report of the Bureau of Vital Statistics: 1910. (The Gazette Publishing Company, Trenton, 1911.)

Report of Nathan Strauss on the Progress Made in America in the Protection of Child Life. Third International Congress for the Protection of Infants, Berlin, September 11-15, 1911.)

Reprints.

Neoplasms Within the Skull: Their Early Diagnosis and Sole Treatment; Nervous Disorders and the Neurologist in Relation to the Profession and the Public; The Need of Neurological Training in Psychotherapeutic Practice; Pen Palsy and Other Occupations Cramp Neuroses: Their Successful Treatment Made Possible by Psychoanalytic Measures Followed by Re-Education, by Tom A. Williams, M. B., C. M.

Observations of the Male Urethra; A Résumé, With Report of Cases, by Henry J. Scherck, B. S., M. D.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans
FOR AUGUST, 1911.

CAUSE.	White.	Colored.	Total.
Typhoid Fever.....	7	7	14
Intermittent Fever (Malarial Cachexia)	2	1	3
Smallpox.....			
Measles.....			
Scarlet Fever.....			
Whooping Cough.....	4	5	9
Diphtheria and Croup.....	2		2
Influenza.....	2	3	5
Cholera Nostras.....		1	1
Pyemia and Septicemia.....		1	1
Tuberculosis.....	42	28	70
Cancer.....	14	7	21
Rheumatism and Gout.....			
Diabetes.....	5		5
Alcoholism.....	3		3
Encephalitis and Meningitis.....	3	4	7
Locomotor Ataxia.....	1		1
Congestion, Hemorrhage and Softening of Brain.....	16	2	18
Paralysis.....	1	2	3
Convulsions of Infants.....		1	1
Other Diseases of Infancy.....	19	11	30
Tetanus.....	1	7	8
Other Nervous Diseases.....	5	1	6
Heart Diseases.....	41	31	72
Bronchitis.....	4	2	6
Pneumonia and Broncho-Pneumonia.....	11	22	33
Other Respiratory Diseases.....	2	3	5
Ulcer of Stomach.....	2	1	3
Other Diseases of the Stomach.....	8	3	11
Diarrhea, Dysentery and Enteritis.....	23	17	40
Hernia, Intestinal Obstruction.....	1	1	2
Cirrhosis of Liver.....	6	6	12
Other Diseases of the Liver.....	1	2	3
Simple Peritonitis.....		2	2
Appendicitis.....	3	1	4
Bright's Disease.....	31	14	45
Other Genito-Urinary Diseases.....	5	10	15
Puerperal Diseases.....	3	3	6
Senile Debility.....	8	4	12
Suicide.....	2		2
Injuries.....	23	16	39
All Other Causes.....	11	7	18
TOTAL.....	312	226	538

Still-born Children—White, 28; colored, 15; total, 43.

Population of City (estimated)—White, 272,000; colored, 101,000, total, 373,000.

Death Rate per 1000 per annum for Month—White, 13.76; colored, 26.85; total, 17.31.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure..... 29.97
Mean temperature..... 82.00
Total precipitation..... 8.15 inches.
Prevailing direction of wind southwest.

New Orleans Medical and Surgical Journal.

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No. 5

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a **WRITTEN** order for the same accompany the paper.)

The Problem of "Nervous Indigestion."

By GEORGE M. NILES, M. D., Atlanta, Ga.

To the physician who has honestly endeavored to drink deep from the Pierian spring, this problem is significant—oft times vexing. To be just to the patient, to safely eliminate surgical contingencies, to either coax or compel an unstable or capricious digestive apparatus into furnishing the body a sufficiency of available nourishment—these are only a part of the whole problem as it is so frequently presented to the gastroenterologist.

These sufferers come to us in various forms; their alimentary tracts present disturbed secretion, sensation and motility, while the psychic relations are generally the most awry. They constitute a generous percentage of the habitual invalids who throng the health resorts and sanatoria; who patronize the freak cures and freakier "curists"; who subscribe to the new cults and fads, and who furnish the predatory fakirs much of their income.

These true neurotic types are seldom found in either the extremes or near-extremes of life, but in those past the twenties and under the fifties—those at the age to care for themselves or others. In children the digestive organs are less impressionable, while in those past the prime of life there seems to be established an immunity; or, on the other hand, they have learned by experience how to side-step such habits or articles of food as are injurious.

This “nervous indigestion” is seldom found among those who earn their bread by manual labor, or among the uneducated and unrefined. Those who labor with their brains, whose nerves are tense, votaries of the “strenuous life,” the eager spirits who burn the candle at both ends—they are the principal sufferers.

Contrary to the reports of some well-posted observers, who claim to find a majority of these neuroses in women, my experience has led me to believe that fully as many men are affected. While women have more time to complain, and seem, in a manner, to possess more sensitive reflexes, men come more directly in contact with the issues of daily life, often floundering among the shallows and breakers, until they suddenly discover digestive disorders cropping out, to their great discomfort. Under such circumstances, these wide-awake business or professional men begin to train their analytic powers on their own internal organs, and before they fully realize the danger of such a habit they find themselves taking each meal, perhaps each mouthful, in a state of gastronomic introspection.

These patients crave relief. They are not posted on vicious circles, on inhibition, nor on hormones. They find it difficult to comprehend that the epigastrium is simply acting as a reflex alarm center for disorders, either material or psychic, entirely outside of that troublous zone. To minimize their sufferings, or to admonish them to “forget it,” proves absolutely unsatisfactory to the patient and asinine in the physician.

Occasionally we can remove an irritating cause, but more often such causes as domestic infelicity, erotic longings, unsatisfied ambition, uncongenial environment, financial reverses, or carping care, are entirely beyond our reach.

In one of the inimitable western tales written by Alfred Henry Lewis occurs the account of the death and burial of a highly-esteemed gambler, on whose tombstone was inscribed this meaty

epitaph: "*Life Is Not in Holding a Good Hand, But in Playing a Poor Hand Well.*"

This fitly applies to the problem now under consideration, as well as others in life.

To enter into the niceties of differential diagnosis in this necessarily brief paper would lead too far afield, so, passing this phase of the subject, eliminating as far as possible surgical indications, and being reasonably certain that no marked anatomic lesions nor important organic changes are underlying the outward digestive discomfort, it behooves us to outline some general plan calculated to meet and control the protean symptoms presented from day to day.

The line of treatment embodied in this study may not stand the test of therapeutic orthodoxy, but it has served me well in many instances, and, as an old ante-bellum negro said to me when a lad, that the only way to learn a thing was by "hard knocks and sudden jerks," some very trying experiences have forced me to evolve certain ideas, which I deem at least worth a trial.

To begin, if practicable, the patient should receive a more thorough and painstaking examination than he has ever had. This serves the double purpose of placing the physician on a solid basis as to direct and indirect morbid conditions, while it satisfies the invalid that a real interest is being taken.

This examination will in every instance furnish a cue by which a preliminary treatment may be inaugurated. Right here let me emphasize that *treatment* is what the patient desires, and as an integral part of this treatment some form of medication meets both an intrinsic and psychic need. Should there be hyperchlorhydria, an oft-present neurosis, antacids sufficient to neutralize the excess will win the opening skirmish and increase the physician's influence. A hypoacidity will naturally call for HCl, which may generally be combined to advantage with nux vomica and pepsin, though the pepsin, apart from being a good vehicle, possesses few of the virtues ascribed to it. Less than ten drops of the dilute HCl amounts to nothing, and more than thirty drops often proves irritating, so, from twelve to twenty drops, well diluted, will give the best results. Occasionally we find achylic stomachs intolerant of any form of acid, and when this is the cause it is useless to push it.

For the almost constant eructations, a combination of milk of magnesia and milk of asafetida, to which is added a small quantity of compound spirits of lavender, tincture of myrrh, or compound tincture of cardamon, may be given *ad libitum*. It is well also to be on the lookout for aerophagia, for, when the eructations are frequent, explosive and odorless, they often consist of only swallowed atmospheric air. When this is the case the patient should be admonished to keep the mouth closed while eating and swallowing, avoiding conversation while food is being masticated.

A point I consider almost the keynote of the treatment is to change the medicine in some way, even though it be simply a change of appearance, every few days. These neurotic alimentary tracts must be kept guessing all the time; for, if they "get on to our curves," we at once lose a great part of our influence. I have often added to an alkaline powder of calcined magnesia and bismuth a little pulverized charcoal or carmin to the increased satisfaction of the patient. The active and indicated base of the prescription may remain the same, so long as the adjuvants are frequently varied.

Constipation is often present, and should be managed like constipation complicating any other trouble, if only the watchword of frequent change is borne in mind.

The question of gastric lavage is somewhat a delicate one, for we occasionally encounter highly-strung people who derive far more harm than good from this procedure. I might say, as a general principle, that, when there is a marked excess of stomach mucus, or a delayed evacuation of the gastric contents, an alkaline or gently antiseptic lavage at not too frequent intervals is helpful; while for hypersensitiveness of the gastric mucosa a lavage containing forty grains of nitrate of silver to the pint, and followed by plain water, will often yield gratifying results. Routine lavage, however, is not, in my opinion, advisable.

Faradic electricity has proved satisfactory to me, though I confess the belief that its influence is mainly psychic. I use the intra-gastric electrode, if the patient does not object, or, if the objections are too strenuous, I apply the large epigastric pad in front with a smaller pad directly opposite on the back, administering the current strongly enough to be perceptibly, but not uncomfortably, felt.

As to massage, vibratory and otherwise, the same may be said.

Regarding the diet, I have often found the patient suffering more from errors of omission than commission. Either reasonably or not, they have tabooed one article of food after another, until they are ingesting hardly enough to nourish an infant in arms.

There was recently referred to me a young Cuban, who had by easy stages trimmed his diet down to a daily quantity of three glasses of malted milk, expecting to continue his work on this munificent allowance. On finding the gastric juices present in a workable quantity, I admonished him to begin eating, assuring him that if he would eat I would help him take care of it. Heeding my advice, he gained ten pounds in twelve days, ultimately making a perfect recovery.

So many of these nervous dyspeptics have developed a sitophobia, or morbid fear of food, that all the persuasive arts of the physician are demanded to keep them adequately nourished. Acting on the principle that "birds who can sing and won't sing must be made to sing," when I find present a decent amount of digestive juices I endeavor with all my might to force these recalcitrant stomachs and intestines to do their duty, even though they do it complainingly.

For indifferent or finical appetites I use the stomachics condurango, calumbo or nux vomica, with compound tincture of gentian or cinchona as a base, changing them constantly, as I have previously indicated. Occasionally, where hyperacidity exists, three-grain doses of orexin, given two hours before meal-time, will wonderfully cheer up an indifferent stomach.

Hydrotherapy is specially valuable in these conditions, aiding, as it does, the emunctories, cleansing the bodily Augean stables, relaxing the nervous tension, and adding its quota of psychic uplift.

The benefits of hydrotherapy have not been appreciated as they should by the rank and file of the regular medical profession, and I consider it high time that we wake up to our opportunities in this important field, not relinquishing it to others, as we have to a regrettable extent.

Change of environment, or even of occupation, should be recommended at times; in fact, there are certain of these cases where a change, and the more radical the better, seems the only method by which the discouraged invalid may be started on the road to Wellville.

The whole plan of treatment is based on reinforcing the weakened digestive functions, wherever situated, pressing every procedure with kindly interest and sympathetic optimism, keeping the patient as busy as practicable, heading off doubts and fears, springing, if possible, some therapeutic surprise at every visit, encouraging each glimmering ray of hope, providing ample calories, so that bodily strength may promote nervous equilibrium, and, without slighting the main issues, taking cognizance of the countless little intercurrent and irritating ills always present.

This study I submit in the interest of that most unhappy and misunderstood class of sufferers, trusting that some of my suggestions may aid in restoring joy to troubled epigastriums, quietude to restless alimentary tracts, and springtime to repining hearts.

Cleaner and More Healthful New Orleans.*

By CHARLES CHASSAIGNAC, M. D., New Orleans.

To an assembly of physicians it is useless to demonstrate that a cleaner city means as well a more healthful city. While we know that perhaps filth does not do directly as much towards causing disease as was formerly thought, we understand all of its possibility for harm through its agency in breeding and harboring infection-spreading insects. We appreciate also that the term "cleaner city" should be accepted in a broad sense as including clean handling and distribution of food products, such as milk, meat, vegetables, fruit, etc.

Equally settled is it that the members of the medical profession are the natural guardians of the public health and that it is as much their duty to prevent disease in persons and in communities as it is to care for the individuals who apply for treatment after illness has attacked them. More and more attention is paid to prophylaxis as its greater relative importance is becoming emphasized, and the public as much as the profession realize to-day better than ever the force of the old adage, "An ounce of prevention is better than a pound of cure."

Accepting as true the above propositions to the effect, on the one hand, that cleanliness means health-building, and, on the other

*Read before the Orleans Parish Medical Society, September 11, 1911.

hand, that the promotion of health through prevention is the physician's mission, the logical conclusion follows that it is an important part of the medical profession's duty to aid in improving the cleanliness of the city.

How, then, should we seek to promote the cleanliness of our city? There are really only two ways, as far as the members of this Society are concerned as such.

One need be mentioned only, as I am satisfied that it is already at work—that is, through example. Yet, I am equally sure that if each member of this Society will talk with his good wife, or dear mother, or loving sister who runs his house, and orders are issued and enforced as to the proper observation of all rules relative to grass-cutting, garbage and other measures relative to cleanliness and sanitation, a great deal will be accomplished thereby.

The other way, as for so many things, is through education. We must do our full duty as missionaries, preaching the gospel of cleanliness and health. We must not miss an opportunity to point out the importance, nay, the necessity, of each one doing his share to assist in the movement which is being inaugurated to secure a cleaner city. We must urge our patients and friends to connect up with the city's beautiful and bountiful water supply, to do away with the offensive and pest-breeding privy vaults, to stop throwing refuse in the streets, to encourage vendors of eatables to screen and keep clean their establishments or stalls, in short to observe all existing ordinances referring to cleanliness and sanitation.

The committee of the Progressive Union in charge of the movement for a cleaner New Orleans is in earnest and proposes to do all in its power to improve local conditions. It has no intention of embarking upon a campaign of criticism or coercion, but desires to arouse the civic pride of the community, to appeal to the citizens to do their full duty in the matter. The committee must act as middle men between the authorities and the people. The public officials claim that the chief difficulty in obtaining results in this city, whose large area, on the one hand, and limited means, on the other, already combine to make the problem a hard one, is the apathy of the people themselves, their failure to comply with existing laws. Therefore, it will be the committee's business to try and make the people mend their ways as well as to aid and

prod the heads of the departments under whose jurisdiction lie the enforcement of sanitary laws and the cleaning of the city.

No detailed plans have as yet been settled upon by the committee, but the first measure mapped out will pave the way for improvement all along the line; that is, the observation of city ordinances pertinent to the subject. This sounds very simple, but is a large task of itself which will require patience, tact and firmness to accomplish. There will be no sensational one-act show if the committee has its way, but a quiet and efficient continuous performance.

After something has been accomplished in this manner, attention will be directed in turn to well-digested measures for correcting specific evils or improving special conditions. The committee courts suggestions from this society as a whole or from any member, and they will be welcomed and appreciated both.

The moral support of this society would be a most valuable asset; in fact, the earnest co-operation of every member of this body would practically make sure the success of the movement for a cleaner city. Will you not give it, gentlemen?

Besides, we are not interested only as physicians and sanitarians. We have the same interest in the health and consequently the prosperity of our city as its other citizens. We will be benefited as much by a prettier outlook, more comfortable homes, a better health average in our families, and increased revenues as the others. We need not be altruistic to be willing to work for the common weal. From a purely selfish standpoint nothing can profit us as much as a cleaner city, leading to a more beautiful and thriving one.

If on these lines the proper spirit can be aroused and kept up in our people, more good a hundred fold can be attained in a permanent way than would have been accomplished by securing the Panama Exposition.

No one better than you can arouse the proper public sentiment, members of the Orleans Parish Medical Society. "Do it for New Orleans."

Paratyphoid Fever and Its Prevention by Means of a Trivalent Anti-Typhoid Vaccin,*

By RANDOLPH LYONS, M. D., New Orleans.

While the subject of paratyphoid fever is not a new one it is, however, only within the past few years that its frequency has begun to be appreciated by the profession at large.

A number of obscure febrile conditions which formerly went undiagnosed or were classed as atypical typhoids, febriculæ, etc., belonged, in all probability, frequently to this type of fever. The greater prevalence of blood culture methods has been the most influential single factor in helping to clear up much of the confusion which still exists in regard to fevers of short duration.

Prevalence of Paratyphoid Fever in New Orleans: Two years ago in a paper¹ published in the *Archives of Internal Medicine*, I made the statement that approximately 4% of the so-called typhoid infections in this city were paratyphoid. Further experience with blood culture work along this line has shown this estimate to be too conservative. The average is nearer 7% or 8% and possibly higher. For example, out of 70 blood cultures for typhoid, 5% to 7% were found to be paratyphoid infections; this does not include cases reported below.

Small Paratyphoid "A" Outbreak: My interest was recently aroused in paratyphoid infections by a small outbreak which occurred among the third and fourth course Tulane medical students last April (1911). I was able to obtain records of four cases. Three of these cases I performed blood cultures on personally, and attended one of them. The remaining three cases were treated by Prof. J. B. Elliott, Jr., to whose courtesy I am indebted for notes.

Source of Infection: The difficulty of tracing an infection among as limited a number of cases is obvious, especially as they did not live in the same neighborhood. Upon inquiry it was found that the students obtained milk, at lunch time, from the same place. This milk was unfortunately examined but once, with negative results. At this time I was informed, by a colleague, of a case in his private practice whose residence was in still a different district, so that it is not improbable that the disease may be disseminated throughout the city.

*Read before the Orleans Parish Medical Society, September 25, 1911.

BRIEF REPORT OF CASES.

CASE 1 (Prof. Elliott's Case). V. D., medical student, age 23. Patient was seen by me on April 4, at request of Dr. Elliott. A blood culture and Widal made. Widal was negative, but culture revealed paratyphoid "A." Two days later patient was admitted to Touro Infirmary. He gave a history of having suffered with headache for a week; also had some temperature, which gradually increased. Bowels costive.

Examination revealed a palpable spleen and liver and a few rose-spots. Temperature 100.2° . His fever then mounted step-like for five days, the maximum being 104° . At the end of a week it dropped from 103.5° to 99.5° , after which it did not go above 101° . Temperature remained normal twelve days, after admission. During entire course of the disease the pulse never went above 100. Patient discharged on April 17, 1911.

CASE 2 (Prof. Elliott). H. S., medical student. On April 1, I made a blood culture and Widal on this case, at the request of Dr. Elliott. Widal was negative, but culture was positive for paratyphoid "A." Patient was admitted to Touro Infirmary April 3, 1911. Present illness began about two weeks before admission, with headache and some fever. Bowels constipated. Has had intense headache for past three days.

Examination showed tongue coated, spleen palpable, no rose-spots. Temperature 101° . Pulse 102. Respiration 20.

Course of Disease: Patient ran temperature for ten days only, the maximum being 103.8° . He was discharged on April 17, 1911. Twenty-five days later, patient had severe pain in hepatic area, and was readmitted, with a diagnosis of cholecystitis. Gall-bladder was opened and drained, and a paratyphoid bacillus isolated from the pus. Patient made an uneventful recovery.

CASE 3. A. C. R., medical student, age 26. I was called in to see him on April 5.

Previous History: Had never had typhoid. Always healthy.

Present Illness: Had been suffering with headache for past few days, and a little fever. On April 2 took a purge. Bowels acted well and continued loose, but headache was not alleviated. Had chilly sensations, but no chill. No nose-bleed. No cough. When seen (night of April 5) temperature was 102° . Pulse 100. Respiration 20. Tongue coated. Pulse dicrotic. Abdomen flat. Spleen not palpable. No rose-spots. Next day the temperature ranged between 101° and 102° . Spleen palpable. Widal negative. No plasmodia or leucocytosis. Blood culture negative.

On April 9 temperature dropped to normal, and remained normal. April 10 paratyphoid agglutination tests against two stains of both "A" and "B" gave positive results, with "A" in 1-50 dilution in 60 minutes.

CASE 4 (Prof. Elliott). B. T., medical student, age 22 years. Admitted to Touro on April 15.

Previous History: Had been vaccinated by Dr. Bass against typhoid on the following dates. January 14, 1,000 million bacilli; January 28, 2,000 million bacilli, and April 1, 2,000 million bacilli.

Present Illness: Suffered with headache and a little fever for several days. Bowels slightly costive.

Examination showed nothing of note, except a palpable spleen. Patient's temperature varied between 100° and 102.5° to 103° for twelve days, then gradually fell by lysis, remaining normal after the eighteenth day. Pulse only rose above 100 on three occasions. Diagnosis was made by blood culture.

SUMMARY: These brief notes will serve to illustrate the type of illness. The average duration of fever in the four cases was

approximately fourteen days. All cases complained at the onset of headache, rather severe in character. All cases presented a palpable spleen at some time during the course of the disease. In one case mention is made of rose spots. The cases showed a tendency to constipation, necessitating enemata. In my case the patient took a purge and his bowels remained loose until convalescence. The relative slowness of the pulse as compared to the degree of temperature, so commonly observed in typhoid, was present in all four cases. The temperature curves show nothing distinctive except, perhaps, some tendency to irregularity. None of the case showed any mental symptoms, as delirium, etc.

On the whole the cases differed in no material way from a very mild type of typhoid. Two of the cases are worthy of special mention.

Case 2, after an apparent recovery from his attack, developed, about three weeks later, a cholecystitis, due to the same infecting organism. This is an unusual occurrence, as paratyphoids rarely leaves any sequelæ, but goes to demonstrate that this group of micro-organisms, like their relative, the typhoid, have a predilection for the gall bladder and bile.

Case 4 is of interest from the standpoint of his vaccination against typhoid. The other three cases had not been vaccinated. This patient received his third and last dose of vaccine (2,000 million bacilli) two weeks previous to his illness, so that there is no reason to doubt his probable immunity against typhoid. This case illustrates the fact that anti-typhoid vaccination does not apparently confer immunity from paratyphoid infections.

Diagnosis of Paratyphoid Fever: Clinically the diagnosis of this type of fever is obviously difficult and often impossible from mild typhoid, yet from a prognostic point of view it is exceedingly important to physician and patient. For a positive diagnosis we must fall back on laboratory methods, and foremost is the blood culture, next agglutination tests. The total and differential¹³ leucocyte counts and diazo reaction are of no assistance in differentiating paratyphoid from typhoid, as similar findings may be obtained in both conditions.

Blood Culture Method: The same technic may be used as for typhoid. It is not within the scope of this paper to enter into the cultural differences of the typhoid-colon group of organisms and

the further separation and identification of paratyphoid "A" and "B." It must also be admitted that the classification of the intermediates is still incomplete. The reader is referred to two excellent papers on the subject by Coleman² and Buxton³.

Agglutination Test for Paratyphoid: The diagnosis for paratyphoid fever by agglutination tests is open to the same criticism as that of typhoid, namely: that it may not be positive until late in the disease, while the reverse is true of the blood culture. Nevertheless, towards the end of the infection or for other reasons it is often necessary to rely upon agglutination tests for the diagnosis. Reliable stock strains of "A" and "B" are often difficult to obtain, so that many laboratories use strains which they have isolated themselves; such cultures are ordinarily not well fitted for stock strains, hence it is best to test the patient's blood against two or three separate strains of both "A" and "B." The dilution should not be less than 1/50 in one hour.

In this country "A" is the common type. On the Continent, paratyphoid "B." This group is more prone to cause symptoms of ptomain poisoning as described under the name of "meat poisoning." In this city I have isolated seven paratyphoids "A" to one "B."

Prognosis: Prognosis is good. Taking both types into consideration, the mortality is under 2%. Experimentally and clinically, paratyphoid "B" is somewhat more serious than "A." Complications and sequelæ are uncommon. Hoskins⁴, in an epidemic of thirty-five cases of para "B," reports hemorrhage in one case and a recrudescence in another.

Immunity: There is increasing evidence to show that typhoid does not confer immunity from paratyphoid. Two years ago Proescher & Roddy⁵ stated that six out of forty-two cases of paratyphoid claimed to have previously suffered with typhoid fever. Case 4 would certainly argue that anti-typhoid vaccination does not protect against paratyphoid fever. It is still to be proven clinically whether an attack of paratyphoid "A" will confer immunity against paratyphoid "B," and *vice versa*.

Pathology: Very little is known as regards the pathology of paratyphoid fever. Wells & Scott⁶ in 1904 collected five autopsy records, including their own case. Splenic enlargement occurred in all. There was a practical absence of any alterations of Peyer's

patches, solitary follicles and mesenteric glands. Two cases showed numerous ulcers, but more like those found in dysentery than typhoid. These were all cases of paratyphoid with typhoid symptoms. Other autopsies are on record in instances of paracolon infections without typhoidal symptoms—meat poisoning, etc.

Prevention or Prophylaxis of Paratyphoid Fever: The general measures applicable to typhoid fever hold good for paratyphoid—*e. g.*, pure water supply, destruction of flies, detection of bacillus carriers, etc. In this connection an interesting case is reported by Sacquépée and Bellot⁷ of a cook in a garrison who gave rise to nineteen cases of paratyphoid fever among the soldiers. Meat should also be suspected, as paratyphoids have been found in cases of meat poisoning. At the present time, as regards typhoid, a special measure is becoming more and more generally adopted as prophylaxis, namely, anti-typhoid vaccination. Its successful use in the United States Army is too fresh in our minds to need any repetition here.

Its employment is becoming more and more general. Owing to the prevalence of paratyphoid infections in this city it occurred to me that it would be of distinct advantage when immunizing an individual against typhoid to protect him, at the same time against paratyphoid infections, so to speak “killing three birds with one stone.” To this effect I made up a trivalent anti-typhoid vaccin; that is, a vaccin containing the typhoid bacillus and paratyphoids “A” and “B.”

Method of Making Up Vaccin: The bacilli are grown separately on agar for forty-eight hours, then washed off the surface of medium with sterile saline solution and thoroughly shaken. The bacilliary emulsions are then killed by heat or phenol. After counting the bacteria, the emulsions are diluted with sterile saline solution so that one c. c. will contain 2,000 million bacilli. This process is repeated for each organism, then equal amounts of the bacterial suspensions are mixed together so that the resulting vaccin contains practically equal numbers of each strain. The sterility of the vaccin is insured by making transfers, the next day, to agar slants or plates.

Dosage: The most satisfactory dosage of this vaccin was found to be 500 million (.25 c. c.) for the initial injection, second dose 1,000 million bacilli, and 2,000 million for the last dose. The

injections were given subcutaneously, into the arm at weekly intervals.

Cases: Up to the present time I have vaccinated but twelve persons. All of these individuals have given good agglutination reactions against typhoid and both paratyphoids.

In immunizing the first two cases I began with a small dose (250 million), but found this to be disadvantageous, as it necessitated a larger number of inoculations to acquire a good agglutination test. An initial dose of 500 million generally causes slight or no constitutional reaction; the local reaction is similar to that seen with anti-typhoid vaccination. Redness and infiltration at site of inoculation with sometimes swelling of neighboring glands. The soreness rarely persisted over two days. In all, except the first two cases, a positive agglutination test was present one week after second vaccination. Case 6, after an initial dose of 1,000 million, gave a positive Widal one week later. This case had 102° temperature the night of his vaccination and malaise the following day. Three of the twelve cases only received two doses.

Resultant Immunity: The degree of immunity conferred on an individual by vaccin therapy is indeed difficult to estimate. The presence of specific agglutinins is but one indication of anti-bodies in the blood. The blood of most typhoid patients rapidly loses its agglutinating power after recovery, yet the majority of these persons retain a lifelong immunity; hence, failure to agglutinate does not necessarily imply loss of protection. Von Dugern⁸ has perhaps thrown some light on this point. His experiments in connection with rabbits inoculated with crabs' blood have shown that even after the specific antitropic substances which have been produced by inoculation have disappeared from their blood, the inoculated animals retain a power of responding more effectively to a renewal of the vaccinating stimulus.

It is a common experience in vaccinating against typhoid to have some constitutional reaction following a large initial inoculation, yet the same dose repeated a week or ten days later will produce less or no systemic reaction. Apparently some immunity has developed in spite of the fact that the blood may show no signs of the presence of agglutinins. Park⁹ states that in spite of the claims of some good observers, there is no relation between the agglutinating and bactericidal power of a serum. Whether or not

agglutinins possess any direct protective function cannot at present be stated with certainty.¹¹

It is quite evident, at all events, that the immunity obtained is far more complex than would appear at first sight, and is made up of a number of factors of which the agglutinins are only one.

The question naturally arises, if such a trivalent vaccin, as described, is to replace the ordinary anti-typhoid vaccin, will it amply protect against typhoid, which is, after all, of greatest importance?

Clinically, as previously stated, all twelve cases gave positive agglutination tests against all three organisms, but the strongest reactions were against the typhoid bacillus in every instance.

The routine agglutination tests were made according to Bass-Watkins¹⁰ macroscopic method.

Microscopic agglutination tests performed on Case 5 may be taken as an example. This individual obtained his third and last dose (2,000 million) three weeks previous to test (August 23, 1911).

	Dilution.	Clumps.	Motility.	Time.
B. Typhosus.....	1-100	Very large	None	10 minutes
" "	.....1-200	" "	"	10 "
" "	.....1-400	" "	"	10 "
" "	.....1-1000	Large	"	20 "
" "	.....1-2000	"	Very slight	30 "
" "	.....1-3000	Small	Slight	60 "
No higher dilutions were tested.				

Microscopic agglutination tests against paratyphoid "A and B" reacted positively up to 1 to 500 in 60 minutes. These results are satisfactory as far as the agglutination tests are concerned, and demonstrate that the largest number of agglutinins are produced against the typhoid bacillus.

In regard to the production of opsonins with anti-typhoid vaccins Russell¹² states that the phagocytic titer is never as high nor does it remain up as long as the agglutinative, but it is always well marked and constant.

It is the purpose of the writer, in the near future, to test the bacteriolytic power of the serum of some of the vaccinated cases against the three organisms, and see whether or not the greatest number of bacteriolysins are produced against *B. typhosus*, thus coinciding with agglutination reactions.

SUMMARY.—1. Paratyphoid fever is more common than is generally credited in this city, and probably in other cities.

2. An attack of typhoid fever or anti-typhoid vaccination does not protect against paratyphoid infection.

3. The advantage of the trivalent anti-typhoid vaccin over the ordinary anti-typhoid vaccin is that the individual inoculated is minimized at the same time, not only against typhoid, but also against paratyphoid infections.

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**The Epidemiologic Features of the Plague in South America
in Connection with the Completion of the Panama
Canal as it Concerns the Health of New
Orleans and the Southern United States.***

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*"From ignorance our comfort flows;
The only wretched are the wise."*

PRIOR.

At the last session of the American Society of Tropical Medicine, held in New Orleans in May, 1911, I was greatly disappointed, though more surprised, that the scientific program of the convention did not include a symposium on plague, if not in all its aspects and relations, at least in some of its phases of etiology and prophylaxis. At the present day the question of plague should hold for every one of us a genuine and deep interest. The possibilities of plague introduction into this city from South American sources, both at this time and following the completion of the Panama Canal, resulting, as it naturally will, in the creation of new influences upon the health of the South Atlantic and Mexican Gulf ports, are sufficiently real and vital to warrant their consideration at this early date. The diplomatic, naval, military and commercial developments which will probably ensue from the joining of the two great oceans are being freely discussed in the lay journals by authorities in the lines of endeavor given above, and who shall say the medical profession should not give thought to the problem the future holds for it at the end of the great task of digging the canal? It will, therefore, be necessary to dwell upon the changes—geographic, commercial and political—which will follow this great engineering feat. The question in its entirety is too vast for a paper of this scope, and for that reason I shall confine myself as much as possible to conditions which may reasonably and directly relate to the health of New Orleans. Necessity may, at times, demand that matters not strictly pertinent to the issue be discussed, but these apparent digressions I shall endeavor to minimize.

The idea of New Orleans ever becoming infected with plague might, by some, be dismissed as a wild dream. Notwithstanding the predominance of belief to the contrary, it is my opinion that

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this great city will yet have that problem for solution. This is a rather bold prophecy, and its fulfillment depends upon the attitude which will be adopted by the local medical profession and the constituted health authorities.

The plague situation in South America to-day is alarming. Despite its interest to this section, it has thus far been given but scant attention. The completion of the Panama Canal will increase the seriousness of the South American plague situation, but all thoughts of this are left unuttered in the State-wide hopes of the trade and commerce to aid New Orleans and Louisiana. The accomplishment of digging the Panama Canal is regarded in this section as of importance from only a commercial standpoint. The linking of the two oceans means, among other things, shorter trade routes from South America and the Orient, and New Orleans, on account of its geographic position, will probably reap a rather large benefit of this trade increase. It is predicted that the marts and markets of the Far East will lay their wares at our doors, and in return we will send ships whence they came heavily laden with valuable cargoes. New Orleans, it is said, will become the greatest export and import market of the New World. The claim is also advanced that it will become the greatest freight center in the United States, as all freight formerly shipped over the trans-continental trunk railway lines will be routed through New Orleans, and thence to the West by the isthmian route. This, in brief, is the picture as painted for this city when the Panama Canal is thrown open to shipping. How much of it is to come true, time alone can testify.

But there is another side of the picture that has not been painted for you—a darker one—the health problem, new to this community, which will arise and require solution. I question that time has erased from your memory the warning of Dr. J. H. White, of the United States Public Health Service, two years ago, relative to the likelihood of plague obtaining a foothold in the City of New Orleans. The suggestion of that able sanitarian at that time was, by a resolution of this Society, ordered to be given to the daily press, so that an intelligent lay interest might be created in the dread scourge. That the daily press cavalierly ignored the resolutions of this Society admits of no denial.

Owing to the importance of the subject I believe a brief his-

torical survey of the disease and some of its previous pan-demics will be of timely assistance. While it is not absolutely certain, it is believed by observers that the epidemics which have been so widely prevailing are similar in nature to the many great plague epidemics of which there exists historical evidence as early as the third century B. C. The first mention of plague is recorded by Josephus, in Book V, chapter I, of the "Antiquities of the Jews," and there is also Biblical mention in the first book of Samuel, in the Old Testament. This latter Biblical reference contains the first note of the etiologic responsibility of the rat in connection with the disease.

The first pandemic in the world's history was in the reign of Marcus Aurelius (164-180) A. D. The next was in the reign of Justinian, when plague began in Egypt in 542, and spread to Syria, and thence over Europe, where intermittently it lasted for fifty-two years. The greatest of all historical outbreaks, perhaps, was the third pandemic, usually called the Black Death, which occurred in the fourteenth century. This pandemic, it is estimated, exacted a toll of over twenty-five million lives and, even to this late day, its mark is not obliterated.

The fourth pandemic in the world's history began in 1894, and still prevails. From the recognized Chinese endemic center in the southwestern province of Yunnan, bordering on Thibet and Burma, plague spread to many other parts of China and to Formosa and Japan. It reached Bombay in 1896, and from that point spread throughout India, and, notwithstanding its sojourn of fifteen years, it shows little sign of declining. Jedda became infected in 1897, and again in 1899. In 1899 the disease made its appearance in Madagascar and Mauritius. A year later Mecca became infected, and it was also seen early this same year (1900) in the Transvaal, South Africa. Later, during the same year, it was noted among the dock laborers of Oporto, Portugal. The year 1899 has been, to date, most eventful in the present pandemic of plague, as the disease appeared in widely separated spots and almost all over the world. In 1900 the disease obtained a footing on the western coasts of the two Americas. To-day we acknowledge its wide prevalence in South America, and at the same time are not over-certain of its absence from the Pacific coast of the United States. It can be readily seen, therefore, that the pandemic of

1894 is still existent, and its ravages not merely unchecked, but in reality growing greater daily.

The current pandemic is similar to those of the past in that the disease has advanced along the highways of commerce, save that its present distribution has been principally by sea routes in contradistinction to the overland routes of former ages. It has also demonstrated that plague can exist and become epidemic to the south of the equator and in the Western Hemisphere. In addition, it has proved that its limits are not necessarily marked by lines of latitude and longitude, nor by isotherms, and that once the infection is imported to any portion of the world it tends to become epidemic there if the local conditions are favorable.

Certain peculiarities of this pandemic are worthy of consideration, presaging, as they do, danger in the future. Principal among these are, first, a marked variation in the susceptibility of individuals, and, second, a like divergency in the malignancy of the disease in certain epidemic areas. These particular characteristics are dependent on certain conditions as yet undetermined, but there is ample evidence of their existence. A third interesting feature is its ease of transmission and great transportability through the medium of indirect, and also direct, infection. Another fact of significance, and, to my mind, the most dangerous, is the tendency of the disease to remain dormant in certain localities, only to recur and recrudescence sporadically. This apparent inability of plague to cause, in one place, a mighty epidemic, yet also displaying very extraordinary powers of recrudescence and exhibiting marked resistance to all known prophylactic measures, is highly dangerous, as it not unnaturally breeds contempt and inspires disregard as to the real latent force of the disease. To illustrate: The number of cases never reaches a stage where the situation might be termed really alarming. This fact, coupled with slow advancement and a low death rate, accustom the people to its presence, and the civic and health authorities are lulled into a sense of false security, and eventually come to regard it as a disease that can be kept within bounds without very strenuous efforts. During this period the disease insidiously implants itself over different parts of the country, establishing numerous foci of infection, only awaiting what may be termed the igniting spark for a monster explosion. In short, such are the peculiar characteristics of the present pan-

demic, which may later mean so much to us, and nowhere are these characteristics more vividly displayed than in South America. In time South America will become the Occidental endemic center of the disease.

It may be asked now, where is the source of our danger? Is our health imperiled from without or within? Is our danger close or distant? In answer to the first query, as well as the second, our greatest danger is without, and not within, our borders. The idea of our danger being a national one first took utterance from Dr. Donald H. Currie, of the United States Public Health and Marine Hospital Service, when he prophetically said: "The Mississippi Valley might some day be infected with plague as a result of infected squirrels." To a certain degree I concede the conclusions of this keen observer are correct, but if the Mississippi Valley is ever infected the cause, I believe, will be through the City of New Orleans or some other Gulf port. This matter will be considered more fully in another part of this paper. Many believe that our only source of danger from without lies in direct communication with the now infected ports of the Far East—India, China and Japan. That there is danger from these sources is not denied, but this is not our source of danger to-day. Our menace to-day is South America, and, in a more or less subsidiary degree, the West Indies, Central America and Mexico. It is the existing infection in South America which threatens our safety, and it behooves us to exercise the greatest caution in repelling the invasion of this traveling disease. The presence of plague in New Orleans or other Gulf ports would imperil the entire country. Thus, to-day, we stand facing a problem the solution of which cannot be undertaken too early.

The entire western coast line of South America is now infected. True, it only lies smoldering, awaiting the spark for a terrible explosion. On the eastern coast the infection is distributed in spots and does not follow a continuous line. How soon these spots may be connected in a chain of continuous infection we do not know.

As to the precise conditions prevailing in South America we are, in a measure, uninformed, and this lack of knowledge constitutes an element of danger that cannot be overestimated. The west coast of South America comprises Colombia, Ecuador, Peru

and Chile, and in not one of these countries does there exist a properly constituted board of health as we understand such bodies. In addition, no reliable certification and recordation of deaths is enforced. Governmental authority relating to health measures is divided in such a manner as to render the service inefficient and confusing. The authorities apparently have not the constitutional power to enact or, at least, enforce such regulations as would tend to lessen the spread of disease and increase professional knowledge on the subject. In some cases there also prevails an appearance of great indifference as to whether or not disease exists. For example, in Guayaquil, Ecuador, it is stated that the inhabitants are inclined to rejoice in yellow fever, as this condition of health keeps out the foreigners who would, they say, invade the country and rob them of their business. The very act of Castro, ex-President of Venezuela, in declaring La Guayra a healthy port and open to commerce while plague was raging is sufficient evidence of the laxity of health laws and the state of public sentiment. This order was criminal in its tendency, and, of course, led to the abandonment of all sanitary precautions. If it had not been for the persistent querulousness of the German Minister, Castro or his successor might be denying to-day the existence of plague.

In 1908 the Porto Rican authorities appealed to the Federal Government to protect the islands of Vieques and Culebra, as they feared those islands would become infected through the bands of smugglers operating in this vicinity.

There is a lack of co-operation between the State and local health officials of South America, and this lack of unity is greatly in evidence during the time of epidemics. Maritime sanitation by the health authorities of these countries is not only improperly conducted, but is as well a hindrance to commerce and a source of expense to ship-owners. A uniform international system of maritime sanitation and fumigation would prove of great benefit to shipping, and at the same time minimize the dangers of spread of the disease. The measures used in combatting the plague are inadequate and antiquated.

As to the original source of infection on the western coast of South America but little is definitely known, though it is believed that commercial intercourse with India during the early days of the current pandemic is responsible for its presence. Some authori-

ties are of the opinion that the infection might have been received from either Santos, Rio Janeiro or San Francisco. Shipping, both coastwise and foreign, is improperly supervised, and there are grave possibilities of the disease being brought unrecognized aboard ships.

When we consider the disseminative agencies of the disease, the character of the exports of these countries should also receive attention. The exports are hay, wool (vicuna, alpaca and sheep), dry salt hides, chinchilla (rodent) pelts, vegetables, wines, nitrates, copper and silver. The risk in this type of cargo lies mainly in the hay, dried hides, wool and pelts. In view of the great loss of life as suffered by China in the Manchurian district through trafficking in the pelts of infected marmots it behooves us to exercise the greatest care in dealing with importations of chinchilla (rodent) pelts.

The recent agitation by United States Congressman Broussard, of the Third Louisiana Congressional District, to have New Orleans designated as a cattle-receiving port from South and Central America, if passed, would have proved a very hazardous measure in the present state of our laws and regulations. It is now positively known that cattle can act as intermediary carriers of plague. This discussion concerning the type of cargo and import merchandise is of importance on account of the transshipment of much of the freight at Panama, Iquique and other points.

A study of the types of the peoples on this infected coast offers a sufficient explanation for the non-eradication of the disease. Social and economic conditions are not much better than those of the Far East. The educational and intellectual condition of the people is of a low order. This state of affairs may be attributed, in part, to the deadening and debasing effects of centuries of brutal bondage and political vicissitude. The admixture of the early colonizing races with that of the natives (Indians) has brought forth a *nondescript* type upon which civilization seems to exercise little effect. The most distinguishing trait in their character is their imperturbable and incurable apathy. They are habitually slow in their movements and extremely indolent. They are timid, shy, secretive and superstitious. The policy of secrecy and denial is peculiar to tropical people, and nowhere is it better exemplified than in the South American. The love of intoxicating liquors is

deeply rooted in their nature. Their dwelling places are nothing more than dark, ill-ventilated, one-story thatched huts, offering no defense from either wind or rain. One small room usually shelters the whole family; their bed is a sheep skin or two; their cooking facilities, one or two earthen pots and a rude oven built into the wall; their diet consists mainly of vegetables and corn products.

The opening of the Panama Canal will bring all these things, with their attendant evils, closer to us, and it is time that we should give the facts our earnest attention. To-day, as matters stand, we are already very close, by reason of trade expansion. Commerce and trade cannot be swerved from their beaten paths. The axiom, that "disease follows trade," is as true to-day as it was two hundred years ago. This is the state of affairs that exists on the western coast of South America, and also on the eastern coast, but, fortunately, in a modified degree, owing to the civilizing and refining influences of European colonization. It need hardly be added that these remarks do not apply to capital cities, such as Buenos Aires and Rio Janeiro.

When the Panama Canal opens up as a highway of trade, further commercial development and exploitation of the resources of the interior and western coasts will follow in the natural course of events. That vast horde of labor now employed in digging the canal will become disorganized, and their love of adventure, prompted by past experiences, will lead them to seek new fields, and what more natural than their goal should be the west coasts of South America? This influx of ex-Panaman laborers, without the strong hand of their former health organization, will prove a serious question. The working out of the possibilities of this great area of western coast, with its fine harbors and a connecting waterway between the two oceans, will mark a new era in the commercial history of this region. But if health conditions do not improve, of which there is small likelihood for many years to come, this portion of South America will be a disease-distributing center for the southern United States. The obstacles to be overcome in bringing order out of chaos loom large indeed. The refining influences of European colonization, by the Monroe Doctrine, are lost to this section of South America. The anti-imperialistic press, together with political jingoism, would prevent the United States

from becoming too deeply involved in the internal affairs of these countries. The ideal solution of this problem, from our standpoint, perhaps, would be for these countries to turn over absolutely their health affairs to that branch of our Government service known as the United States Public Health and Marine Hospital Service. They should be paid by the respective countries, and should rule in sanitary matters with an iron hand. It may be suggested that such an arrangement, if forced upon these countries, would be a violation of international law and the spirit of the Monroe Doctrine. Nevertheless, in 1900, Great Britain, in the case of the Transvaal Republic and the Orange Free State, in South Africa, in the effort to safeguard and regulate the commercial and political rights of its subjects living in those countries, which, however, acknowledged suzerainty to the old country, insisted on privileges which, the negotiations culminating in hostilities, finally resulted in the overthrow of the local governments; and is it too much to say that this great Government will not yet insist upon such measures in South America as will assure the health of the millions of its citizens? I am inclined to think not.

These, as briefly as could be stated, are the facts regarding our danger of plague infection from South America. That they are serious is obvious, especially when we know that the type of plague prevailing in this section possesses to a high degree every characteristic of the present pandemic.

There are also in our midst certain dangers the prompt recognition of which will aid in minimizing any danger arising in the near future. It is not my purpose to burden you with facts of common knowledge, but a survey of actual local conditions is necessary for the maintenance of this discussion. In the first place, New Orleans has suffered in the past from many outbreaks of yellow fever, and, to-day, is the home of many tropical diseases. Therefore, at the outset, New Orleans may be considered as a predisposed community to such a disease as plague. In a city threatened with plague, sanitary measures should be instituted to put it in as good a condition as possible so far as concerns the elimination of the rat. The effective method of repelling invasion is to be prepared to meet it. As to the deplorable sanitary conditions in New Orleans, the recent reports of the Louisiana State Board of Health furnish ample evidence. Conditions in New Orleans,

unfortunately, are most favorable for the concealment and spread of plague. New Orleans, according to the last census, has a population of 339,075, and, according to the local Health Board, an estimated population of 373,000—272,000 white and 101,000 negro. In recent years there has also grown up a very large Italian population, including many Sicilians. These people, together with the negroes, present a serious health problem. Neither the negro or the Italian participate in the civic life of the community, but they are a factor of no small import in our social and economic affairs. The mode of living among these people violates almost absolutely modern sanitary regulations.

To appreciate how plague might secure a foothold in this city, it becomes necessary to consider the trade relations enjoyed by New Orleans. The sea trade of New Orleans is very large, and there is constant intercourse with Mexico, the Central American Republics, Panama, West Indies and the northern and eastern ports of South America, and, in addition, indirect communication with the west coast of South America through the Isthmus of Panama Railway.

In reference to the Isthmus of Panama, it must be remembered that it occupies a unique position, in that it is one of constant exposure to many tropical diseases. The question as to the future of the Canal Zone itself following the completion of the canal is one of importance. Colonel Goethals, engineer-in-chief of this great undertaking, has suggested to the Isthmian Commission that the country contiguous to the great canal, except that portion required for the habitations of the military force necessary to its protection and the canal employees, be allowed to return to its pristine wildness. This suggestion is undoubtedly due to the fact that the completion of the Panama Canal means the abandonment of the great health organization which has maintained such a high standard of sanitation. The ports on the western coast of South America have been in constant communication with endemic plague centers for at least seven years. Each year the disease, in its insidious approach, creeps nearer. La Guayra, on the east, and Guayaquil, on the west coast of South America, both plague-infected, are only three days' journey from the isthmian ports and are in constant communication therewith. The Royal Mail Steamship Company, plying between infected ports of Vene-

zuela, refuse to carry deck passengers to Colon, but allow first-class cabin passengers to embark for the same point. With this anomalous condition, can we keep Panama and the chain of Central American ports on the Atlantic side free from plague? To-day we have a widely advertised feature of travel, known as the sight-seeing of the canal, which is largely patronized by people from Louisiana and neighboring States. When one remembers that these travelers from the United States must necessarily be thrown in contact with travelers coming from the plague ports of South America, it is not difficult to appreciate the ease with which plague may gain entrance to New Orleans. And it must be remembered that the bulk of travel from the isthmus is via New Orleans, and cases might get through, despite the most stringent precautions. The majority of the ships engaged in this trade are manned by Chinese crews, and, considering the receptivity of these people to a tropical infection, such as plague, they constitute an element of danger that cannot be easily waived aside. The vulnerability of New Orleans by sea invasion ought to be readily apparent.

Reverting to Dr. Currie's prophecy as to infection of the Mississippi Valley by means of diseased squirrels, which I do not think a probable source of infection to this region, it is necessary that local health conditions relating to shipping be discussed. To my mind, the infection of the Mississippi Valley, if it occurs, will be brought about by the disease appearing in New Orleans and being transmitted up and down the river through the agency of the steamboat and the negro *roustabout*. This line of reasoning is based on the fact of the close proximity of the steamboat landing with that of wharves reserved for tropical steamers. Intercourse between the rodents of these two styles of craft will be difficult to prevent. Next to a granary, a steamboat acts as the ideal home for rodents. Infected rodents once gaining access to the steamboats will prove dangerous to the health of negro *roustabouts*. The negro *roustabout*, on account of his habits, would readily fall a victim to the disease, and, due to the migratory tendencies of this type of negro laborer, the disease will be spread far and wide. The efficiency of the United States Public Health and Marine Hospital Service might be suggested in refutation of these statements, but the vigilance of this service, together with the modern methods of maritime sanitation and fumigation and quarantine, are not in

themselves sufficient to prevent plague from obtaining a foothold in New Orleans. Despite the most extreme measures, in many instances plague has escaped detection at the hands of health officials and within a very short time assumed epidemic proportions. Granted that every facility be provided for the exclusion of plague, the impracticability of absolute prevention must, owing to the peculiar mode of transmission, appear evident. For our own protection and safety it is absolutely necessary that we waken to the gravity of the situation as it will probably exist in the near future. To-day our river front presents a most inviting condition for the introduction and transmission of plague. The wooden docks and wharves of this city are dangerous. From one end of the port to the other there stretches a row of wooden wharves overrun with rodents. The method of discharging cargo and dunnaging on these wharves is not proper. Cargo or freight should be placed above the ground, so as to prevent rodents from gaining access thereto in the easy manner now possible. Ships coming from tropical ports are not properly supervised by the municipal health authorities. Ships on which rodents abound tie next to the wharves and, in seeking food, the rodents find their way ashore and mingle with the native rat. If the ship rat is infected, the natural results may be easily imagined. Extra precautions should be taken, if, with no other, with ships engaged in the sugar and coffee trades and hailing from South American ports. Ships' hawsers and cables are in no single instance protected by rat shields and trapping devices. Absolute safety demands nothing less than rat-proof landings, piers and wharves.

Very close to the river front, and within a stones' throw of the ships berthed to the wharves, are located warehouses, freight depots, grain elevators, packing and cold storage plants, burlap and bag factories, cotton compresses, stave yards, stables and other industrial plants and institutions, all of which, it is safe to say, are overrun by rats. It has been shown that, to gain access to these structures, the ship-rat has but a short distance to travel. It is here, where the intermingling of the native and ship-rats, will play havoc. These buildings in question are old, in many instances poorly constructed, and should be condemned by the municipal engineer. In short, many of these buildings are relics of the old steamboat trade and ante-bellum days. There also exists in con-

nection with the industrial sections, thus described, a condition peculiar to New Orleans, and that is the living districts—thickly populated—of the poorest and most illiterate type are hemmed in between these industrial sites. They are, to be exact, located, at intervals of five or six blocks, between the plants and establishments to which reference has been made. A few concrete examples, I believe, will illustrate the peculiar condition.

First: The French Market section abreast of the river will be considered. The housing conditions are wretched. Buildings in this neighborhood are antiquated, dilapidated, dingy, poorly ventilated and notoriously lacking in sanitary requisites. Individuals and animals are herded in close proximity; courtyards are littered with rubbish and dirt. In addition to the stabling of one or more horses, the residents of this neighborhood, largely Italians connected with the market industry, use the rear yards of their premises for warehousing—and the surplus stock often adjoins the manure pile. This section, particularly, is overcrowded and insanitary, the residents superstitious, and to-day, considering its physical proximity to many of the activities connected with tropical shipping, may be regarded as a most favorable nidus for the inception of an infectious process such as plague. The rat in this district is really a domesticated creature. Bred for many years amidst a population averse to sanitation and indifferent to the inconvenience of its presence, the rat lives in the closest association with the inhabitants of this district. Families of rats have been found in the same room with mankind. A plentiful supply of food is provided for them, both inside and outside the buildings. Foodstuffs are kept stored in the living rooms and the rear yards, thus supporting a large rat population in the closest proximity to the human inhabitants.

The section next engaging our attention is upper Tchoupitoulas street. Housing conditions on this thoroughfare are deplorable. The structures are, for the most part, one-story cottages of the double type, containing, as a rule, three to five rooms, and housing more inmates than proper health regulations approve. A peculiar feature of these cottages is the back shed arrangement, a frame structure separated from the house proper by an earth yard, generally littered with trash and dirt. In this back shed is the water closet, wood rack, coal bin, and whatever other family effects and

plunder may be accumulated. Here, too, the clothes of the family are washed and ironed. The water closet arrangements are also unique, in that one whole closet serves the two sides of the cottage, the only separation being a thin wooden partition extending only from the floors of the respective sides to the top of the closet. Rats' nests, containing a family of young ones, are not uncommonly found amidst the plunder which is accumulated in these sheds by the poorer classes. In addition to these cottages, there are many two-story ramshackled buildings, the lower portions of which are given over to trading purposes, while the upper floors are used as living quarters. There also exist in these neighborhoods sailors' lodging and boarding-houses and innumerable saloons and eating-houses—many of the lowest grade. The larger proportion of the structures in this vicinity and the streets closely adjacent thereto are antiquated, dirty, in ill repair and devoid of all sanitary conveniences, and certainly must be considered as having some bearing on our health problems. The average citizen has no idea of the rat population of this territory.

The majority of the inhabitants of this section are in some manner connected with the maritime trade of the port—a phase of the question that is to be considered in discussing the transmission of plague, either by direct or indirect infection. The fact that the city has established the garbage-receiving stations along the river front should also be borne in mind. The recreation and relaxation for these people, to a great extent, is found in spending the evenings by the wharves, and, in some instances, ship visiting. Accordingly, these localities—and there are others—may justly be considered predisposing to any type of disease which might arise. Were we to single out these centers, and from the standpoint of sanitation and hygiene compare them to other sections of the city, the result would justify terming them the pathologic spots of the community.

So far as general sanitation is concerned, New Orleans is in a primitive state. Only those who have visited the sections especially referred to can form an approximate idea of the amount of filth which accumulates in these centers, or the deplorably unsanitary condition of the buildings. This is especially true in the French Market section, where the type of building is the three-story tenement.

Justification of this broad condemnation may be summarized briefly on the following lines: Density of population; congested housing; faulty and dilapidated construction; lack of sanitary conveniences; proximity to shipping—the readiest source of plague infection in the future.

The streets leading to the wharves from these residential districts are on a par with the conditions found in the houses. The paving is exceedingly bad, and irregular in plan. The open gutters on each side of the roadway contain slowly-moving or stagnant, putrescent water. An abundance of solid, decomposing refuse, at frequent intervals, partially blocks the gutters. The cleaning of the gutters is unique, in that the sludge removed is deposited on the side of the ditch and allowed to remain on the street until it is completely dried, to scatter away in the form of dust or finds its way back to the ditch following heavy rains. During the heated term these ditches become dry, and at the several street intersections, under the wooden crossings, the rat finds a very safe harbor. These wooden crossings connect with the ditches on each side of the street, and the ditches are in turn connected with many homes by superficial drain pipes. When a heavy rain falls the rat seeks safety by means of the drain pipes, thus gaining entrance to the homes. The dangers of the wooden street crossings in the neighborhood of shipping need no elaboration at my hands.

The rat secures sustenance through the exposed garbage of the households. It is no unusual spectacle to see the gutter edge of some streets lined with a wonderful array of overlaid garbage boxes and pails. The method of disposing of ashes, rubbish, paper sweepings and manure on dumps is clearly objectionable, and is an evidence of the lack of progress in municipal sanitation and civic pride. In New Orleans there are several of these repugnant and foul-smelling dumps within the city limits, and in more than one instance closely adjacent to residential districts.

Again, the city is full of structures, confined to no particular section, harboring rats underneath their wooden floors. Our attention should be directed, first, to the breeding places of rats, and cutting off their food supplies. It is of paramount importance that their number be speedily decreased. The system of garbage removal is entirely inadequate for a city of this size. If the householder could be convinced of the urgent necessity of keeping

garbage in a tightly-covered receptacle it would aid in rat extermination.

The rat-proofing of stables, restaurants, warehouses, grain elevators and residences presents an appallingly large and complex problem. The experience of San Francisco, nevertheless, proves it is feasible. The adoption of these measures alone will give us a reasonably permanent safeguard against the spread of plague should it be introduced.

The changes and reforms necessary to purchase safety are many and, what is more appealing to the taxpayer, expensive. Without delay there should be established a non-infectible zone between the residential section of the city and water front. For the accomplishment of this drastic reform sanitary measures should be directed to the exclusion of rats from the wharves and first tiers of industrial blocks.

In connection with the foregoing scheme of a non-infectible zone, a laboratory should be equipped for examination of all rodents killed or found in the vicinity of the wharves and river front. This laboratory would serve two purposes: (1) It would keep us advised of the health of the rodents; (2) the constant examinations would open up interesting observations on the subject of rat leprosy and rat tumors. This laboratory should be open to physicians, to enable them to become acquainted with the pathology of the rat. An exhibit illustrating the various lesions of plague in rodents, and other points in pathology, was prepared for the Alaska-Yukon Pacific Exposition at Seattle. Such an exhibit in New Orleans would prove of great value, and should form part of the proposed laboratory. A thorough and persistent search, followed by careful examination of rodents to-day, might reveal conditions undreamed of.

Earnest co-operation between the people and health authorities in the enforcing of all necessary health regulations should be secured. Contrary to general belief, it is not the health authorities at fault for the existing conditions. It is the people of this great city, indifferent and uncaring, who should be held culpable for many of our sanitary shortcomings. The attitude of the press towards radical, though absolutely necessary, health measures should be friendly, and not antagonistic or disparaging. The interests of the commercial organizations must be aroused, and the

fact must be impressed upon them that truth and discussion as to our sanitary shortcomings are better than the policy of concealment and silence often practiced in the past. The education of the people as a whole regarding the dangers of the rat should be conducted in the same manner as was the anti-mosquito campaign in 1905.

The measures necessary to secure desired results would be substantially as follows: The building laws of the city would have to be amended so as to provide that hereafter all structures should be made rat-proof—particular attention being given to the construction of floor and side walls and plumbing arrangements. Stables, private markets and places where foodstuffs are kept should be given marked attention. Existing structures should be made rat-proof whenever deemed necessary, according to proper standards to be announced by health officials. Insanitary buildings or structures, or parts thereof, should be declared a nuisance, and provision made for the rectification of such conditions. Basements, back sheds and the open spaces beneath buildings should likewise be made rat-proof. Landlords should be induced to realize that proper rat-proofing of their property is an investment which will greatly enhance property values. The rat must be, if necessary, "built" out of New Orleans by the use of concrete, brick and stone in the foundations and side walls of all buildings.

Adequate sanitary regulations concerning the collecting and disposal of garbage should be adopted. Householders should be required to keep garbage in metal receptacles and tightly closed. There is a city ordinance covering this subject; it should be resurrected and enforced. Street paving and cleaning should be brought up to the highest possible state of efficiency. Wooden bridges and crossings should be abolished.

We should endeavor to teach the business interests operating on the river front that the inauguration of an anti-rat crusade would prove of considerable economic advantage, and in a short space of time they would probably become the strongest supporters of the work.

All docks and wharves should be so protected as to prevent rats from gaining entrance to them, at either high or low stages of the river, from vessels berthed alongside such docks and wharves. Food products stored in docks or wharves should be so arranged as to

make it impossible for rats to gain access thereto or coming into contact therewith. The wooden docks are obsolete and form ideal harboring and breeding places for rats, opening avenues for infection from South or Central America or the Orient. The building of stone or concrete wharves is costly, but not prohibitive. Where possible, wharves should be protected from rats by fending vessels off shore. This should apply particularly to vessels from suspected ports. Hawser and lines leading ashore should be protected by either rat shields or rat funnels. Ladders and gangways should be lifted at night, after the work of discharging is concluded for the day. As considerable difficulty would be experienced in wharf regulations, their enforcement would depend on competent policing.

I submit the results of my investigation and the study of this important subject to the medical profession with the hope that the facts I have gathered will serve to remind it of the danger of plague introduction into New Orleans—a danger which will increase in proportion with its maritime progress and commercial advancement. We must not be deluded into the belief that New Orleans is in no danger from invasion by plague and the reforms that I have discussed are entirely needless. Those whose positions or influence make it possible, should exert themselves in favor of the inauguration of a vigorous and well-directed campaign against rats.

As for myself, I shall take refuge behind the old Spanish proverb: "*En salvo esta el que repica,*" which means: "He is in safe quarters who sounds the alarm."

Painless Hematuria.

By FERDINAND C. WALSH, M. D.,

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Hematuria being a symptom of such import, and often being the first premonitory indication of a grave condition imperiling the integrity of some part of the genito-urinary tract, we should, in every instance, lose no time in ascertaining the source of bleeding and applying that method most applicable for the relief of the condition responsible.

In hematuria unassociated with pain, discomfort or other subjective symptoms referable by the patient, we are at a total loss, without resorting to the use of the cystoscope, in determining its origin, and we are too often prone to await the appearance of other symptoms which would aid us as a guide to the source of trouble, thereby depriving the patient of the great value of an immediate diagnosis.

Except in extremely rare instances, the pathological process in all symptomless hematurias is induced by one of three agents, which may be at work at any point in the urinary tract, these agents being tuberculosis, calculus, or tumor. In tuberculosis it is unusual to find bleeding unaccompanied or preceded by vesical irritability; in bleeding due to calculus formation, pain is fairly constant, and the urine, in general, is found to contain pus in appreciable amounts; but the bleeding due to tumor formation is so often of this symptomless character as to render its appearance almost pathognomonic of that condition. While the newgrowth may, and often is, found to have a position higher up the urinary tract, the most likely seat of tumor presenting hematuria as the sole symptom is in the bladder itself, and, unless of extremely small size, is found without the area of the vesical trigone. Not that tumors invading the trigone are unusual, for the contrary is the case, but tumors in this area are seldom found which do not produce other symptoms referable to this region, such as pain and vesical irritability.

The following cases will serve to illustrate the value of a cystoscopic examination in determining the origin of hemorrhage, as well as demonstrating the weight this symptom alone should have in causing us to suspect vesical tumor formation:

CASE NO. 1. Referred by Dr. F. M. Hicks, June 15, 1911. Patient H. A., age 59 years. Hematuria appeared about two years previous; lasted one day, and reappeared at various intervals since, these intervals being several weeks apart. Patient moved to this section on account of a tuberculous son, who, it was hoped, would derive benefit from the climatic change. No other tuberculous family history. Abdominal inspection and palpation is negative. He was easily cystoscoped, and on the left lateral wall a non-pedunculated tumor about the size of a hazelnut was clearly seen. This tumor, from its appearance, distinctly pulsating, is most probably an angioma.

CASE NO. 2. Referred by Dr. T. T. Jackson, June 20, 1911. Patient J. V., aged 58 years. The day previous, June 19, 1911, on arising, he noticed that the urine contained a large amount of blood. That same afternoon he consulted Dr. Jackson, who showed me a sample of urine passed. We noticed in this bloody urine one small particle of tissue having the characteristic macroscopical appearance of papilloma. The following morning,

June 21, he was cystoscoped, and a small pedunculated tumor found occupying a location low down on the right wall of the bladder just without the trigone. The day succeeding, the patient was operated by Dr. Jackson, and the tumor easily removed.

CASE No. 3. Referred by Dr. J. Braunnagel, July 18, 1911. Patient J. S. For six months past has noticed that the urine has almost constantly contained blood. A diagnosis of ulceration at the vesical neck had been made, and local treatment directed to this point. Absolutely no other symptoms could be elicited from the patient, who is a large, well-nourished individual of about 38 years. The bleeding in this case was rather profuse, but the bladder was quickly washed and distended, the cystoscope at once revealing a small tumor, apparently a papilloma, just above the right ureteral orifice, and completely obscuring this opening from view, except when pushed aside by the beak of the instrument. From the center of this small tumor blood was seen constantly oozing, falling in tiny streams, through the medium of the clear medium, to the base of the bladder.*

CONCLUSIONS.—1. Hematuria is always to be looked upon as an indication of gravity.

2. Cystoscopy should at once be resorted to.

3. Painless hematuria, with other symptoms absent, generally points to vesical tumor located outside of the trigone and readily accessible to operative interference.

4. As benign tumors of the bladder, if undisturbed, generally undergo malignant change, they should be removed as soon as a diagnosis is made.

Louisiana State Medical Society Proceedings.

EDITED BY PUBLICATION COMMITTEE,

DR. JOSEPH D. MARTIN, Chairman, 141 Elk Place, New Orleans, La.

DR. C. H. RICE, of New Orleans, read a paper entitled

A Plea for the Proper Feeding of Infants.

Before some of you settle down for a short, comfortable nap, let me say, speaking as a general practitioner, that I am thoroughly familiar with the hypnotic effect of papers on this subject. The great majority of the members of every State society are general practitioners who, driven by a sense of duty and a desire to learn, attend the annual meetings with the hope that some paper other than a rehash from text-books will be read. Therefore, they cannot but listen with languid interest and sleepy indifference to the fellow who ventures to

* I operated this patient August 1, and, through a suprapubic incision, removed the tumor, which was, according to report from the pathologist, Dr. B. F. Stout, a fibroma.

drag out that old and frazzled subject, infant feeding. So let me assure you in the beginning that I am not going to bore you with statistics or the report of cases.

It was my intention to go into the details of the percentage feeding of modified cow's milk, but it occurred to me that the time is ripe for someone to cast aside all dull, technical language and present to the Society, in as graphic and forcible a way as possible, the tremendous importance of this new method of feeding, and its wonderful possibilities as a life saver; to make you see the only solution of the feeding problem as it is seen by those doctors and laymen who are giving their time and money to make this a safer and better world for the children that come into it.

The death of a child is a fearful thing; not only in that it colors the life of the parents with pathos, but it is a direct loss to the State—a loss that can be expressed in dollars and cents—and the time is coming when someone will be held responsible for the death of a child from a preventable disease. The fact that the child is the greatest asset of a country is what caused the recent alarm about race suicide. But race suicide seems to me a needless fear. It is the awful mortality of those already here that should concern us most. The wail of the unborn is not near so distressing as the pitiful cry of those babies that are dying by the the thousands from disorders of nutrition; who are literally starving to death in a land of plenty.

This question of nutrition is of not much importance to the adult, for he can earn, beg or steal food enough to sustain life; but to those infants that are deprived of mother's milk, disorders of nutrition are the direct and predisposing causes of untold suffering and a frightful mortality—a mortality so appalling as to be almost unbelievable even by those familiar with the statistics. Yet it is doubtful if these dreadful figures reveal the whole truth, for malnutrition predisposes infants to so many acute and chronic affections that it is impossible to estimate the exact mortality.

The causes of this high death rate have been rightly attributed to the evils of modern civilization, such as the overcrowding of people in the cities, bad hygienic surroundings, the

hurry and excitement of life that renders so many mothers incapable of nursing their offspring, and the lack of a pure milk supply. But, up to recent years, the greatest cause of this fatality has been the inability of the doctors to prepare a suitable substitute for breast milk. Unfortunately, the high death rate that still exists is largely due to the fact that a big per cent of practitioners have not yet become acquainted with and adopted the modern method of percentage feeding. To better impress you with the truth of that last statement let me give you a brief history of my experiences in the feeding of infants before and after I came to use modified cow's milk.

For six years I drifted along in general practice, treating, as most of you do, everything from cholera infantum to senile debility, and was vain enough to be satisfied with all but my feeding cases. My success with these cases was far from good, yet it did not particularly disturb me, for my results were not any worse than those of the other men about me. It seemed a hopeless problem that no one would ever solve.

One case of marasmus that I well remember, and in which I made a hopeless prognosis, was rescued by an old negro woman, who fed it upon butter and mashed potatoes. You can imagine my astonishment when that little skeleton grew sleek and fat in spite of the midsummer weather. That case puzzled me for a long time. I was convinced that the ancient and honorable potato held a potent charm that medical research had overlooked, but, somehow, never had the nerve to include it in my diet list. I continued to feed this class of cases on diluted cow's milk, condensed milk, buttermilk and broths, with the results that are familiar to all of you who treat children.

A year ago I moved to New Orleans and became interested in pediatrics. During my service in the clinics of Drs. Butterworth and DeBuys I first became acquainted with the new method of percentage feeding. At first I watched with considerable skepticism the milk formulæ that were written out for the cases of malnutrition; but, when these infants showed a gain of two to six ounces a week, my skepticism vanished, as did the mystery of the potato. The pediatricists were doing in a careful, scientific manner just what the old woman in her

blind instinct had done. They were supplying in sufficient amounts the food ingredients that these starving infants needed. By diluting whole milk, or cream, and adding milk sugar, they were adjusting the fats, carbohydrates and proteins according to the weight, age and digestion of each infant. The results obtained in those clinics last summer were excellent. The majority of the infants that remained under observation regained their loss in weight and had no further trouble. Some of the others remained under weight, but managed to live through the hot months without any digestive disturbances.

In my own clinics at the Charity and Presbyterian Hospitals the results obtained by this method have been so satisfactory, so far in excess of that from the old methods, that I am convinced that the time has come when all of us who treat little children must cast aside our ancient and foggy ideas about infant feeding and adopt the method that, in the opinion of the pediatricists, is the solution of the feeding problem; the one and only proper way to feed, during the first year of its life, the child that is deprived of mother's milk.

Just ponder for a moment upon the fearful death rate from disorders of nutrition and then realize if you can that there is now a way to save eighty per cent. of the hundreds of helpless babies doomed to die in the coming hot months. What does this mean? It means that never in the history of medicine has so great an opportunity for doing good been offered to the general practitioner. It means that the fearful responsibility of a glorious work has been placed upon our generation of doctors, and as individuals and as an organized body we must give the best that is in us.

As individuals we must learn the percentage feeding of modified cow's milk. It is a duty that each of us owes to humanity and to his conscience.

As an organized body our work is clearly indicated. We must begin at once a State-wide and never-ending fight for pure milk—milk that will run less than twenty thousand bacteria to the cubic centimeter and that can be fed raw. Pasteurized or boiled milk does not give the same good results that we get from raw milk. Heat has upon the digestibility of milk much the same effect that it has upon an egg, and, besides

that, even though the bacteria are destroyed, it does not affect their toxins.

In the bigger cities the great work has already been started. A year ago the New Orleans Pure Milk Society was organized with Dr. Butterworth as president, and two dairies, under the supervision of the Commission, are now supplying pure, rich milk. It would be interesting to have Dr. Butterworth tell you more about the work that is being done. At the clinics of the Presbyterian Hospital and the Touro Infirmary milk depots have been installed, and this clean milk, accurately and carefully modified to suit the needs of each infant, is furnished without charge to those who cannot pay.

Now don't think for a moment that this is a work that needs to be done only in the cities; that a milk is pure simply because it is obtained from a cow standing in an open lot twenty miles from a railroad. A filthy negro milking a dirty or diseased cow may produce a milk as virulent as that obtained from the foulest dairy in the city. Wherever there is a sick baby to feed, the cow that supplies its nourishment must be in sound health and must be milked with all the necessary aseptic precautions. The last Quarterly Bulletin of the Louisiana State Board of Health contains some excellent articles on "Dairying and Milk in Louisiana."

Those of you who are not familiar with the method of percentage feeding, but who appreciate the seriousness of the situation and the work that is to be done, should buy the latest edition of some good text-book and burn the midnight oil. It will take a little time and patience to get a good, working knowledge of the method, but once you have mastered its principles you will find it the most satisfying work that you do, and will take hold of each feeding case with the intense interest of a child with a new puzzle. And as you come to realize more and more the great value of the method and the possibilities that it offers, you will come to see the need of a standard milk for obtaining accurate percentages and the need of a milk dispensary for the filling of your milk prescriptions.

Those who are too lazy and indifferent to learn this method will soon find themselves facing two dangers. First, Tulane is turning out each spring a hundred young doctors who have

had percentage feeding hammered into their heads for two years. It is the only method they know. These men are locating in the town and country and will prove dangerous competitors. We are all familiar with the fuss the women make over the new doctor who steps in and saves the baby.

Second, the manufacturers of proprietary foods have already seen the drift of the feeding problem and, with their usual alacrity in grabbing a good thing, are now printing on each food package full directions for the amounts of milk needed to give any desired percentages of fats and proteins. These directions are being carefully and eagerly studied by the thousands of mothers who try these foods before sending for the doctor. The time will soon be here when a mother will have little regard for the doctor who cannot figure percentages or estimate the number of calories per kilo.

But the most disheartening thing in the world is to meet that sort of doctor who, in his silly and pompous vanity, refuses to be taught anything, and who presumes to deny the value of a method of which he knows nothing and which has received the enthusiastic endorsement of the best men in the country. That type of doctor is the most dangerous animal that walks the earth.

In conclusion, let me once more impress upon you the importance of this new method of feeding; let me once more remind you of the work that it being done, and the work that we must do.

In France, where the birth and the death rates are dangerously close together, pure, nourishing food is being served without charge to starving mothers that they might be better able to nurse and save their precious offspring. In this country a movement is already on foot for the betterment of the child's condition; for the reform of the present educational system; to provide special instruction for backward children, and to furnish numerous and spacious playgrounds for the ragged little beings that are cooped up in the slums of the city.

It has been said that the religion of the future will be the worship of the child, and the humble cow will be a sacred animal. That is a beautiful thought, and I cannot see how any

doctor with heart enough to love a little child and brain enough to think a big thought can fail to see his duty.

The hot months are upon us, and the first call that some of you will get when you return to your homes may be to the bedside of a case of malnutrition. Remember then, that, in all the suffering and misery that we see, there is no sight more pathetic than a marasmic infant; no call more appealing than the feeble whine of the emaciated little being whose only hope of life is in the ability of the doctor who writes its milk formula.

DISCUSSION OF PAPER BY DR. RICE.

DR. L. R. DEBUYS, New Orleans: I wish to congratulate Dr. Rice upon sounding such a timely note. The matter of infant feeding can be made simple to the general practitioner. Let him first find out whether the family of the patient he is treating can afford to have ice enough. The division I make is this: ice cases and no ice cases. Those cases that can afford to have ice can safely use milk. In cases that cannot afford to have ice, milk, even boiled, if not kept on ice, is dangerous. Boiled milk will rot rather than ferment. In New Orleans, where we have a pure milk society, we know that the inspected milk (the milk endorsed by the Pure Milk Society) does not contain tubercle bacilli, because the milk is produced from herds free from tuberculosis. We can, therefore, feed raw milk. To those who do not have the opportunity of securing inspected milk, the next best thing is to pasteurize or boil the milk in order to protect the babies. Of course, both the pasteurized and boiled milk must be kept on ice. If ice cannot be afforded, then, and then only, should we prescribe one of the proprietary foods, modified to meet the requirements of the baby. With regard to the matter of feeding cow's milk, the greatest trouble in the past has been that the physician has been inclined to make a modification of cow's milk to represent the mother's milk in its composition. This is not right, as there are a great many differences between the fats, sugars and proteids of woman's and of cow's milk. If we make weaker dilutions we will find that we will get better results. So any of us, when called upon to care for these cases of

feeding, might make one-quarter milk and three-quarters boiled water; and if the baby stands that, then we can make it one-half milk and one-half water, and so on, adding a sufficient quantity of sugar of milk to bring the sugar content to approximately 7 per cent.

DR. RICE (closing the discussion): The purpose of my paper was to impress upon the entire Society the importance of the feeding problem, and to try, if possible, to arouse the interest of every general practitioner in the subject, for it is the general practitioner who treats the majority of these cases and who can do the most good in the work that is to be done.

It would be a wonderful thing if, in a year or two, we could have a symposium on the feeding problem and have men from all sections of the State tell of the fight they have made for pure milk, the establishment of milk depots in all the cities and smaller towns, and a greatly reduced death rate. Such a work as this would win the applause of the world, and place this Society head and shoulders above any State society in the country.

DR. S. D. PORTER, of New Orleans, read a paper entitled

Results of Author's Investigation Concerning the Extent of Hookworm Infection in Louisiana.

During the past year so much has been said concerning the prevalence of hookworm disease in the Southern States, and, as Louisiana is one of this group, I thought some reliable statistics on the prevalence of the disease in this State would be of particular interest to the members of the Society.

At the last meeting of the State Society, Dr. Allan C. Eustis read a paper entitled, "The Prevalence of Hookworm Disease in Louisiana," in which he reported one hundred and twenty-eight cases for the whole State. You can readily appreciate the difficulty experienced by Dr. Eustis in obtaining definite data on this subject when you consider the fact that the State laboratory made only one fecal examination in 1908 and three during the year 1909. At that time the active campaign now being conducted by the Louisiana State Board of Health, with

the co-operation of the Rockefeller Sanitary Commission, was not in operation. Louisiana was the last of the nine Southern States now conducting an active campaign for the eradication of hookworm disease to begin the work. November 1, 1910, I was appointed director for the work in this State, and as the first duty of the State director is to make a preliminary survey of the State to determine the sections in which the heaviest infection exists, I have been aboard the Health Exhibit Train during its tour of the State, and have thereby had the opportunity to cover nearly the whole State in a very short period of time. This preliminary survey soon convinced me that the disease was much more prevalent than the profession thought, and the detail work done by the men in the field has substantiated my opinion.

There are only three parishes in which sufficient work has been done to positively determine the percentage of infection, but when we consider that the same climatic, soil and sanitary conditions, habits and customs which exists in these three parishes exist in so many other parishes of the State, and if to this we add results of eighteen hundred microscopical examinations made of specimens, a few from every parish in the State, the results of the work done at Tulane by Dr. Bass, and the work done by my men at the Louisiana State University and the Industrial Institute at Ruston, we must admit that there is a pretty general infection over the State and that there is not a wide variance in the degree of the infection. I believe, however, that the infection is heavier in the hill parishes than it is in the low, flat, alluvial parishes. The disease is also more prevalent in the more sparsely settled sections of the State, where the opportunity is afforded for going to the bushes for relief, and consequently soil pollution is at its maximum.

The method in which these specimens for examination were collected was as follows:

One of the sanitary inspectors, as the men in the field are designated, visits a school; he lectures to the teachers and children on hookworm disease; he then furnishes the teachers with a number of specimen containers for distribution among

the children. The doctor or a male teacher instructs the boys and a female teacher the girls how to collect, and the information which must be furnished with each specimen, namely, age, sex, color. These specimens are brought to the school by the children and delivered to the teacher, who in turn gives them, or sends them, to the doctor. The doctor makes the examination, not knowing from whom the specimens came.

Very little work has been done in the strictly rural districts, except in those parishes in which detail work has been done; the greater number of specimens coming from the towns and villages, or semi-rural districts.

MICROSCOPICAL EXAMINATIONS MADE IN THE FOLLOWING PARISHES
IN THE STATE.

PARISH.	NO. EXAMS.	NO. POSITIVE.	NO. NEGATIVE.
Acadia	27	3	24
Ascension	10	0	10
Assumption	9	1	8
Avoyelles	23	4	19
Bienville	298	75	223
Bossier	7	3	4
Caddo	15	2	13
Calcasieu	33	12	21
Caldwell	3	1	2
Cameron	6	3	3
Catahoula	1	0	1
Claiborne	6	1	5
Concordia	1	0	1
De Soto	7	2	5
East Baton Rouge	128	19	109
Franklin	6	1	5
Grant	17	7	10
Iberia	5	0	5
Iberville	8	0	8
Jackson	54	26	28
Evangeline	1	0	1
Lafayette	6	4	2
Lafourche	5	0	5
LaSalle	3	2	1
Lincoln	432	145	287
Livingston	3	3	0
Madison	2	0	2
Morehouse	5	1	4
Natchitoches	6	0	6
Orleans	8	0	8
Ouachita	6	1	5
Plaquemine	1	0	1
Point Coupee	18	2	16
Rapides	11	3	8
Red River	3	3	0
Richland	4	1	3

No. Inspected.	No. Closets.	100%	75%	50%	25%	10%	0%
126	247	36	3	14	42	153	
One school had one closet for girls.							
Two schools had no closets at all.							

SANITARY CONDITION IN

Washington Parish,	100	75	50	25	10	0
563			100	10	375	84
Bienville Parish,						
176			6	3	62	105

SANITARY CONDITIONS IN OTHER SOUTHERN STATES.

Alabama—Of 31 schools visited, one in every five was equipped with girls' toilets and one in every ten with boys' toilets.

South Carolina—Only 50 per cent. of the homes and schools are properly supplied with closets.

Virginia—Records of 1,000 farms show only 15 per cent. had any kind of toilet at all. Of 7,088 schools, 3,830 had no closets at all.

These figures are given to impress upon you the relation between soil pollution and hookworm disease.

In conclusion, I want to call your attention to a few important points in this paper:

First—These estimates are based on microscopic examinations.

Second—The cases were not selected.

Third—The greater number of specimens came from people living in railroad towns, where soil pollution is not as great, and shoes are worn more and at an earlier age than in the strictly rural communities.

Fourth—That many of the specimens were from people in the higher walks of life.

Fifth—Laboratory not taken advantage of.

Sixth—These figures should suffice to convince the members of this Society that hookworm disease does exist in Louisiana to quite an extent. One thousand eight hundred and five microscopical examinations taken at random show 40 per cent. infection. Is it not time a note of warning was sounded and an active campaign continued for the eradication of this curable and preventable disease, which is increasing the death rate, dwarfing the mental and physical development of the children and reducing the efficiency and earning capacity of so many of our citizens?

DISCUSSION OF DR. PORTER'S PAPER.

DR. PORTER (closing): In reply to Dr. Storck's criticism about the figures being insufficient to arrive at the percentage of infection, I will state that I thought I had made that very clear. I made the statement that there had been sufficient work done only in three parishes to arrive at a correct estimate of the degree of infection. Of course, we all know that the cities are not so heavily infected as the rural districts. In the rural districts there is the absence of closets in a large number of homes. We do not find severe infection where soil pollution is not great. I want to say, however, in arriving at an estimate of the State as a whole, we have adopted this plan: We propose to take two hundred specimens from each parish; these specimens were taken at random by wards or school districts, going into the school and taking ten children in that school, and taking another school and getting ten children. We believe that two hundred examinations were necessary before we can arrive at anything like a fair estimate of the degree of infection in the State. In the three parishes in which we have done this work—Bienville, Lincoln and Washington—we find that our opinions are corroborated.

The paper was purely statistical, and I thought it would be of interest to the Society. I agree with Dr. Storck, that the data are entirely insufficient for the State at large or as a whole. Dr. Storck doubted the feasibility of publishing these figures to the world, that Louisiana is heavily infected with hookworm disease. I am publishing these figures to the organized medical profession of this State, and, further than that, we know what the policy of concealment meant to New Orleans, and what the policy of concealment meant to the whole State of Louisiana in regard to yellow fever. Now, is it not a better policy to publish to the world that Louisiana has hookworm disease, but that we, as Louisianians, have sufficient intelligence and determination to rid ourselves of it, than to get back to the policy that prevailed during the treatment of the epidemics of yellow fever we had in this State—a policy of concealment?

I wish to thank Dr. Danna for his remarks. His figures in the Charity Hospital do not correspond with Dr. Calloway's investigations in the Shreveport Hospital. He has made systematic investigations or examinations of all patients in the Charity Hos-

pital here, and I think the doctor told me he found 50 per cent. of his patients infected. We can appreciate that, in a large institution like the Charity Hospital, with its limited force of microscopes and microscopists, it is almost an impossibility for them to give the time that is sometimes necessary, except in suspected cases, where the doctor directs that examinations be made, to make a systematic examination of all patients that come in there.

I appreciate Dr. Danna's remarks in so far as they apply to the co-operation of the profession. I do not propose to go into details as to the campaign we are conducting now in the State, but we realize that the co-operation of the medical profession will enable us to accomplish a great deal, but without it we can absolutely accomplish nothing in this State. We must have it, and we come to you and appeal to you for your co-operation, for your assistance in this great work, and I am satisfied if you will go out into the country you will find many more cases of hookworm infection than you had hitherto supposed.

Dr. Rice spoke yesterday about the underfeeding of infants and children. If you will go out into the rural schools and see the number of children there apparently underfed, getting insufficient and improper nourishment, you would doubtless attribute their condition to that fact, as we did before we began our investigation. But when we began to investigate the condition of these children we found that was not true. Their condition is not due to the fact of their being underfed or being fed improperly or insufficiently, but their condition is due to hookworm infection. The disease is practically a rural disease. It is certainly much more prevalent in rural communities than in the urban or city communities.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

The Standards of Medical Education.

The *Journal of the A. M. A.*, in a recent editorial entitled "The Choice of a Medical School," in the concluding paragraph practically discriminates against all schools of medicine not requiring two years of college work before entrance to a medical college. Exception should be taken to this attitude of the official journal of the national association, on several grounds, but chiefly because no such fiat has been directed by the Council on Medical Education and the Association of American Medical Colleges as yet has made no steps towards so radical a recommendation as the *Journal* undertakes. We do not question that the desire of all medical educators should be for the best preparation to be had, but we do question the ethics of the discrimination displayed by the *Journal* as evident in the editorial referred to.

"Of the class A Colleges, twenty-eight are now requiring two or more years of college work for admission. The student will not be making a mistake should he select one of these twenty-eight schools, the diplomas from which are acceptable at present in practically every State of the Union. * * * Disappointed, indeed, will be the student who, after having spent a large amount of time and money, finds in graduation that his diploma *is not recognized in a large number of States.*"

The last part of the editorial (which we have italicized) is particularly pernicious in its implied statement of facts. To tell the truth, there are few States which require more than a high school education, and of these a very *small number* which require by State law one or more years of college work as preliminary to medical study.

The New York State Board of Education, which is quoted in one particular in the discussed editorial, makes the high school the basis of preliminary education, and has raised the high schools in New York State to a degree of efficiency which satisfies the law in that State. Mr. Augustus S. Downing, the Assistant Commis-

sioner of Education in New York State, at the 1910 meeting of the American Medical College Association in Baltimore, urged upon that Association the importance of distinguishing between a legal standard and an ideal standard of medical education. He submitted the strongest sort of argument for a minimum legal standard within the limits of recognized efficiency, leaving the ideal standard to wealthy and endowed institutions.

In the South it must be a long time before any medical school may take an arbitrary rule in fixing standards of education, beyond the possibilities of the masses, and as yet no Southern school has evolved which is independent enough, either by endowment or State subsidy, to cater to the "classes" alone.

Tulane has gone further than other Southern schools giving a full medical course, in requiring one year of college work in the sciences, and even this conservative college has provided a pre-medical college year for high school graduates in order that they may not be forced to go away from home to obtain the necessary preparation.

It is indeed unfortunate that the *Journal of the A. M. A.* should even by implication allow a misleading suggestion to come into its editorial pages, and we are sure that every college of medicine which is honestly conducting its administration to the end of training physicians must utter a protest against their official organ declaring war on them by a wholesale recommendation to students to attend by preference the colleges of favored privileges and endowment.

It will take much argument to persuade many State Legislatures to put out of business their educational institutions by making laws which render the conduct of such schools impossible. When all the States recognize the importance of the support of professional schools, and when a high sense of moral obligation to the public obtains among those who make the laws, we may hope for a uniform and ideal mode of medical education in which only those who have attained the highest plane of special education may share. Until then, the country must be served with the varied groups of scientists and practical physicians, trained for their particular fields, and a variety of colleges must exist to satisfy the demand.

The New Orleans Charity Hospital.

The appeal to the public for aid in its present need by the Charity Hospital of New Orleans must reach far in its demand upon the sympathy of the citizens of Louisiana and of the States neighboring, which have for so many years benefited by the eleemosynary charity dispensed by this great institution.

One hundred thousand dollars is wanted—for the purpose of satisfying additional room for the sick and for the maintenance of the new quarters as well as for those now in existence.

The appeal must reach, with a peculiar demand, the physicians who have been graduated under the tutelage conducted in the wards of the Charity Hospital, and the response to such an appeal should be prompt. No matter how little the gift may be it will add to the fund needed now.

It is deplorable that a State institution should be compelled to make such an appeal to the public, when its relation to the public is essentially State-wide in its service, but the State has not seen either the necessity or the wisdom of making the Charity Hospital all it should be by right of historic association, service and future purpose.

In this time of political preferment, with groups of candidates for public office, no greater promise could be made to the people of Louisiana by any candidate than that the Charity Hospital should be properly provided for.

Meantime the humanitarian side must appeal to the taxpayer, who already pays for State institutions, and the ever-willing public must, in spite of niggardly legislatures, see the charitable side and give freely to this good cause.

If any who may read our petition for the Charity Hospital feel that they may be able to give, contributions should be sent to the Charity Hospital through the Chairman of the Executive Committee, Mr. Sam Blum.

Plague.

In this issue of the JOURNAL is published an extensive article on the plague by Dr. H. D. King, of New Orleans, to which our readers' attention is particularly directed.

This is not the first warning sounded, as the above paper states, and it should not be the last.

The generally optimistic spirit of the most of the human race postpones the evil day, and New Orleans is no exception among the rest of civilized cities of any size. The history of epidemics has always shown people unprepared for the attack and usually burdened with such an evil before proper means have been established for a relief.

The rumblings of a plague visitation, however, have been heard now some time, and it has been pointed out that the natural history of this disease almost necessarily means its spread over new territory during certain periods of time.

Surgeon J. H. White, of the United States Public Health and Marine Hospital Service, pointed this out quite graphically two years ago in a paper published in this JOURNAL, and he sounded the alarm for New Orleans as in the direct line of march of the disease.

In discussing the paper published in this issue of the JOURNAL, read before the Orleans Parish Medical Society, Dr. Creighton Wellman emphasized the biological history of the disease and corroborated the fears of Dr. White, basing his opinions upon a different but none the less potent point of view.

The time for prevention is now, and not two years from now, when the Panama Canal is opened. The local and State Boards of Health should systematically organize a crusade against rodents, as was done in San Francisco—*after* the disease was recognized. The co-operation of the New Orleans Progressive Union, of the New Orleans Board of Trade, as well as of other lay bodies, should be solicited, so as to create wide interest in the task, and at the same time to create the necessary fund for carrying out well-formulated plans. The study of rodents and their diseases, always with the outlook for plague-bearing rats, should be undertaken in the several laboratories in New Orleans, and the destruction of rats, as well as their prevention, should be begun.

Several small cities in the United States, notably in Texas, have already declared war on vermin, and the results of the efforts of these small cities have been sufficiently encouraging to make it a problem of solution in our own communities.

A beginning, however, must be brought about, and this should properly come through the Health Boards, who can organize the various groups of individuals interested.

No political question, nor even sociologic question, in New Orleans to-day can possibly weigh in importance with that of rat-extermination for the prevention of plague, and the start should be made at once.

The Southern Medical Association in Hattiesburg.

The JOURNAL, elsewhere in this number, publishes the preliminary program of the Association, which presents a number of most attractive subjects, and many of them timely. The whole Southern profession is interested in the questions of pellagra and poliomyelitis, and a general conference of State Health Boards is also arranged for this meeting.

The Association desires to extend an invitation to all physicians of the South, whether members or not, and the project is on foot to broaden the body so as to embrace all of the Southern States in its membership, so as to make the purposes and activities of the Association cover all of the pregnant interests of the entire Southern profession and its contingent public. The JOURNAL urges all of its readers to attend what promises to be an exceptional meeting of this young, but successful, organization.

Erratum.

On the second line from the bottom of page 286 in the JOURNAL for October, in the article of Dr. C. W. Allen, the terms, "one-half ounce in normal salt solution," etc., referring to the dose of novocain, should read "one-half per cent."

While the typographical error is obvious, the JOURNAL desires to correct the expression to meet the intention of the author.—Eds.

Abstracts, Extracts and Miscellany.

Department of Internal Medicine.

In Charge of DR. E. M. DUPAQUIER, New Orleans.

ADDITIONAL NOTES ON PRACTICE.—The existence of Malta fever in the United States had been predicted in this JOURNAL'S Department of Internal Medicine some time ago, from the affluence of immigrants from the Levant in our midst.

Careful readers of the *Journal of the A. M. A.* have noticed the papers of Gentry and Ferenbough, the second quite recently (September 9, 1911), the title of which is quite clear, namely, 'Endemic Malta (Mediterranean) Fever in Texas, with the Isolation of the *Micrococcus Melitensis* from the Two Patients.' Naamé (of Tunis) was the first one to try cryogenin with or without adrenalin, the latter combination only when syndrom pointed to a disturbance of the suprarenal functions (hypoépinéphrie méliteuse—*i. e.*, asthenia, collapsus, as in all severe infections).

Schmall (of Nice) followed in 1903. Pyramidon, like other antiseptics, lowers the temperature momentarily, while cryogenin *keeps it down*. In the meantime the critical phenomena, sweats, chiefly, are followed by a *betterment of the general condition*.

Melitosis, judging from its evolution, is probably not immunizing; it is anaphylactic—that is, while it is growing, the patient becomes more and more sensitive to the melitensis toxins, and, therefore, more or less *rebellious to treatment*. The *Micrococcus melitensis* grows in resistance, while the body juices are weakened in strength from the effect of the infection on the glands, liver, spleen, suprarenals, seminals, thus decreasing the resisting powers of the organism and reducing to a minimum the rôle of the phagocytes.

At any rate, in melitosis, cryogenin is not a nervous antithermic whose use seems irrational, as Audibert (of Marseilles) claims. It does not irritate the stomach, as claimed by Darbois. Finally, cryogenin can be handled without fear of danger.

Cryogenin in melitosis would rather have anti-anaphylactic action, like quinin in malaria, according to Naamé's personal opinion, he claiming that quinin, reputed a malarial specific, fails too often in malaria, and must be administered for too long a

period in malaria to be so regarded as a malarial specific. Quinin in malaria is not any better than cryogenin in melitosis; it is an anaphylactic.—(*Presse Médicale, Province Médicale, Société Médicale des Hôpitaux de Lyon, 1911.*)

Department of Surgery.

In Charge of DR. F. A. LARUE and DR. P. L. THIBAUT, New Orleans.

DECOMPRESSION OF BRAIN.—Mr. Delbet, in *Revue de Chirurgie*, May 10, 1911, discussing this subject before the Société de Chirurgie of Paris, said that he had had, during the past twelve months, four cases of cerebral tumors, in which he decompressed with his trephine.

One case in particular was remarkable from the fact that the patient, operated on *in extremis*, showed signs of respiratory syncope five minutes after the administration of chloroform, the heart continuing to beat forcibly. The heart-beats persisted for twenty-four hours without a single spontaneous respiratory movement, and that notwithstanding lumbar puncture with no hypertension and decompression, which, on the contrary, revealed a high intracerebral tension.

The disassociation of intracranial and intraspinal tensions is well known, diminishing the value of lumbar puncture in differentiating by the tension of the spinal fluid between inflammations and tumors of the brain.

Delbet recognizes the value of cerebral localization, but with no over-confidence.

Whether the dura should be incised at once or later on is the great question.

Contrary to Horsley and Krause, he prefers operating in one seance, as he cannot admit that two sittings are safer. He thinks that sudden deaths from decompression are due to certain peculiarities of the tumor.

Finally, concerning the value of the procedure, Delbet grants that it is a palliative intervention of short duration.

Two reasons does he give for its performance: the optic neuritis may retrocede; the pains are immediately suppressed.

Mr. Second, who has had a large experience in cerebral surgery, does not lay much stress on instrumentation, although he favors Martel's and condemns the mallet.

Rapid death may follow decompression of the bulbo-cerebellar region, so he advises, before the occipital trephining, to make a subtemporal decompression so as to allay the symptoms of hypertension. Second affirms having seen good results from ventricular and lumbar punctures, so these methods should not be discarded.

Second believes in extirpating cerebral tumors which have been exactly located, providing that this can be done without much surrounding damage. He operates at two sittings.

He advises, first, lumbar puncture; then, if necessary, decompression. The immediate opening of the dura he considers dangerous. He merely cuts the skull, which oftentimes suffices; if not, then he splits the dura. He looks upon it as a benign procedure.

The therapeutic value cannot be questioned, for patients are relieved, and some may even be cured, if the lesions are curable, or the progress of the condition may be checked.

Lucas-Championnière defends the so-called failure of cerebral topography, and says that surgeons have been too limited in their localizations, hence the numerous failures. In fact, careful study of the symptoms of cerebral localization guides one to the diseased focus.

Although he approves of the ingenious modern devices, he says that the rongeur is too often neglected. He discards entirely the chisel and mallet, due to the cerebral concussion thereby produced.

He admits, with Horsley, that the two-sitting operation is preferable, conceding that sometimes the dura should be incised without delay.

Mr. Delorme remarked that he had had two cases. The first, with a tumor of the bulb, died the night of the operation, which consisted in a large trephining of the Rolandic region.

An enormous cerebral hernia developed in the other case after an extensive removal of the temporal. Infection with the bacillus pyocyaneus set in, death ensuing quickly.

Mr. Sieur decompressed a soldier who had encaphaloid cancer of the kidneys, lung and brain. In addition to violent cephalalgia, he had epileptiform spells. Both of these symptoms ceased immediately, and for the next two weeks.

Mr. Walther considers: First, the localizing the lesions, and emphasizes that in four cases he operated with a firm diagnosis of localization; in each case the trouble was found as forecasted.

Second. He is no partisan of the chisel and mallet, having noticed the pulse become slow, and even stop, due to the percussion. He uses the gouge forceps, or the burr, when he has not at hand the latest instruments, which are certainly time-savers.

Third. He is convinced of the safety of operating at two sittings. He acted accordingly in three cases, and they all fared well.

The fourth case, the tumor being easily removable, he did it at one sitting. Just as the tumor was being lifted from the brain the patient stopped breathing and succumbed, notwithstanding all measures of resuscitation.

Mr. Lejars lauds Martel's technic, which reduced to a minimum the anesthetic and the bleeding. To diminish the immediate risk of decompression, he prefers the two sittings, making at first a wide craniectomy, without incising the dura, which may suffice to alleviate the pains. He recited a remarkable personal cure.

LARUE.

Department of Ear, Nose and Throat.

In Charge of Drs. A. W. DEROALDES and CLYDE LYNCH, New Orleans.

SALIVARY GLANDS.—At the seventeenth annual meeting of the Laryngological, Rhinological and Otological Society, held in Atlantic City, June 1, 2, 3, a discussion took place on the anatomy, physiology, symptoms, diagnosis and treatment of the salivary glands. (*Journal of Laryngology, Rhinology and Otology*, September, 1911.)

Dr. Johnson Held (New York) discussed the anatomy and physiology of the parotid, sub-maxillary and sub-lingual glands, their histological structure, including the secreting cells, the mechanism-producing activity of the secreting cells, their changes during secretion, and the quantity, character and property of the fluids secreted; also the conditions affecting secretion.

The glands were grouped as labial, lying under the mucous

membrane of the lips; buccal, lying under the anterior edge of the masseter muscle; palatal, in the hard and soft palate, and especially in the uvula; molar glands, found behind the last molar teeth, and lingual, lying beneath the mucous membrane of the tongue, near the circumvallate papillæ and along its lateral margin.

He pointed out the fact that, in operating on the parotid, the space should be enlarged by extending the head with the mouth open. It should also be remembered that, on account of the intimate relation existing between the parotid and external auditory canal, an abscess formation in the former could break through and drain the latter.

Dr. Myles, in discussing the symptomatology of these glands, reported a case of chronic inflammation of all the salivary glands and their ducts, with occlusion of the ducts and swelling of the glands, which was ultimately relieved by dilatation of the ducts and astringent medication to their lumen.

In another type of chronic inflammation, suppuration takes place with necrosis, as seen in cases of typhoid fever. These cases frequently end fatally. Swelling of the gland is the most common symptom of involvement. A straight needle held at right angles in a needle-holder and passed through the swollen gland will frequently discover an unsuspected stone and clear up the diagnosis.

Dr. Beck discussed the treatment of ptyalism, aptyalism, dry mouth or xerostoma, epidemic parotitis, sialodochitis or acute infection of the glands, and their ducts; abscess, phlegmonous inflammation, Ludwig's angina, simple hypertrophy, cysts, ranula, air tumors, chronic granulomata, neoplasms, calculi, salivary gland fistula, salivary duct fistula. During the discussion of this symposium Dr. Thomas Hubbard (Toledo, Ohio) said that most cases of recurring parotitis were due to calculus, and reported one such case that had existed ten years, complete cure following the removal of the calculus. He operated on a salivary duct fistula by encircling the duct with a needle threaded with fine silver wire; a double perforated shot was slipped over the ends of the wire and fixed by compression. Daily twisting soon brought the wire through, with a permanent opening and drainage into the mouth.

Dr. Elizabeth Hurd, who produced experimental parotitis by injecting a diplococcus (recovered from a case of "mumps") into the salivary ducts, had thus determined the cause of epidemic parotitis.

The interesting condition of emphysema of the salivary glands, due to the use of high-tension wind instruments, is seen in musicians, glass-blowers, etc. Dr. Dorendorf recorded cases in musicians in Freiburg.

Dr. Hubbard made a plea for the establishment of the relation of mumps to nerve deafness, and reported some cases occurring in his practice.

Dr. George L. Richards (Fall River, Mass.) said he had removed a gland, presumably for cancer, when an examination of the gland showed a calculus. In another case a straw was the offending substance, and stress was laid on the fact that, when there was swelling coming on reasonably early in a relatively young person, the presumption was against cancer. In such cases, calculus could easily be found.

Dr. L. B. Lockhard (Denver, Col.) reported a case of a man 24 years who had pulmonary tuberculosis. There appeared a hard swelling in the left parotid; mumps was thought to exist. In a week, softening occurred. Incision evacuated an ounce of pus containing diplococci. After five weeks of discharge the cavity was curetted, disclosing tubercle bacilli, but no diplococci. At this time the right parotid suppurated, the pus showing both diplococci and tubercle bacilli.

Medical News Items.

PRELIMINARY PROGRAM OF THE FIFTH ANNUAL SESSION
OF THE SOUTHERN MEDICAL ASSOCIATION
AT HATTIESBURG, MISSISSIPPI,
NOVEMBER 14, 15, 16, 1911.

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Dr. D. W. Jones, Brookhaven, Miss.

Dr. A. B. Cooke, Nashville, Tenn.

Dr. Oscar Dowling, New Orleans, La.

GENERAL SESSIONS ON PUBLIC HEALTH AND PREVENTIVE MEDICINE.

The New Prescriptions—Oscar Dowling, State Health Officer of Louisiana, New Orleans.

Medical Organization—Its Philosophy and Objects—W. H. Sanders, State Health Officer of Alabama, Montgomery.

Prophylaxis of Insanity—J. M. Buchanan, Superintendent East Mississippi Insane Hospital, Meridian.

The Psychic Center—J. T. Searcy, Superintendent Alabama Bryce Insane Hospitals, Tuscaloosa.

Important Factors in the Prophylaxis of Malarial Infection—Captain Charles F. Craig, U. S. Army, Washington, D. C.

The Prophylaxis of Uncinariasis—C. Wardell Stiles, Public Health and Marine Hospital Service, Washington, D. C.

A Menace to the South—Creighton Wellman, Tulane University, Department of Tropical Medicine, New Orleans, La.

Sanitation of Southern Cities—Charles A. Mohr, City Health Officer, Mobile, Ala.

Discussion of the proposed organization of City, County and State Health Officers, Boards of Health and Boards of Medical Examiners of the Southern States.

SECTION ON MEDICINE.

William Krauss, Chairman, Memphis, Tenn.; C. C. Bass, Vice-Chairman, New Orleans, La.; H. E. Mitchell, Secretary, Birmingham, Ala.

Chairman's Address—William Krauss, Memphis, Tenn.

Dietetic Treatment of Arterio-Sclerosis—Allan Eustis, New Orleans, La.

Chronic Heart Disease, with Some Early Diagnostic Symptoms—J. H. Honan, Bad-Nauheim, Germany.

The Stokes-Adams Syndrome—J. G. Gaither, Oxford, Miss.

Pyelitis in Infancy—D. T. McCall, Mobile, Ala.

A Review of the Possible Etiological Factors in Malarial Recurrences. The Significance in These Cases, and Their Treatment—Graham E. Henson, Crescent City, Fla.

Some Notes Upon the Histology of Malaria—M. Couret, New Orleans, La.

Pernicious Malaria, with Cerebral Symptoms Resembling Heat Stroke, with Report of Cases—H. H. Booth, Drew, Miss.

Control of Typhoid Fever by Vaccination—James J. Peterson, Mobile, Ala.

The Dietetic Management of Typhoid Fever—J. B. Guthrie, New Orleans, La.

The Vaccin Theory in Typhoid Fever—J. B. Elliott, Jr., New Orleans.

SYMPOSIUM ON ACUTE ANTERIOR POLIOMYELITIS.

History of Epidemics of Anterior Poliomyelitis in the United States—B. L. Wyman, Birmingham, Ala.

History of Birmingham Epidemic of Anterior Poliomyelitis—Robert Nelson, Birmingham, Ala.

Etiology and Pathology of Poliomyelitis—E. M. Mason, Birmingham, Ala.

Symptoms of Anterior Poliomyelitis—J. E. Seay, Birmingham, Ala.

Diagnosis of Poliomyelitis—J. Ross Snyder, Birmingham, Ala.

Treatment of Poliomyelitis—Thomas D. Parke, Birmingham, Ala.

Report of Cases of Infantile Paralysis with Unusual Features—W. G. Somerville, Memphis, Tenn.

Orthopedic Treatment of the Results of Infantile Paralysis—Michael Hoke, Atlanta, Ga.

SYMPOSIUM ON PELLAGRA.

A Discussion of the Etiology of the Symptom-Complex Called Pellagra—J. S. Turberville, Century, Fla.

The Etiology of Pellagra—My Theory—John Jelks, Nashville, Tenn.

Pseudo-Pellagra—G. H. Lavinder, U. S. P. H. and M. H. S., Savannah, Ga.

Pellagra in Tennessee—J. A. Allbright, Nashville, Tenn.

Observations on Pellagra in Italy—H. P. Cole, Mobile, Ala.

A Cursory Study of the Skin Lesions in Pellagra, and Their Differentiation—H. E. Menage, New Orleans, La.

A Discussion of the Gastro-Intestinal Aspects of Pellagra—George M. Niles, Atlanta, Ga.

The Prognosis of Pellagra—C. C. Bass, New Orleans, La.

Treatment of Pellagra—J. A. Kimbrough, Thomasville, Ala.

Are the Jews Immune to Pellagra?—Bernard Wolff, Atlanta, Ga.

Symptoms of Pellagra—Louis LeRoy, Memphis, Tenn.

Discussion to be opened by Creighton Wellman, New Orleans, La.

MISCELLANEOUS.

Acute Intestinal Infantilism—Marion McH. Hull, Atlanta, Ga.

Tuberculosis—P. J. Glass, Mobile, Ala.

Pyloric Stenosis in Infants—Gaston J. Griel, Montgomery, Ala.

Some Intestinal Parasites of North Mississippi—Louis Kohlheim, Saltillo, Miss.

Alcohol as a Therapeutic Agent—T. H. Frazer, Mobile, Ala.

Vaccin Therapy in Pertussis—Allan Eustis, New Orleans, La.

Two Unusual Cases of Morphineism—George E. Petty, Memphis, Tenn.

- Use of the Cystoscope in Diagnosis*—J. A. McDonald, Memphis, Tenn.
Treatment of Placenta Previa—Z. B. Chamblee, Birmingham, Ala.
The Value of the Clinical Laboratory in Diagnosis—E. S. Sledge, Mobile, Ala.
Malta Fever—J. D. Weis, New Orleans, La.
The Lucedale Epidemic of Cerebro-Spinal Meningitis—W. D. Ratliff, Lucedale, Miss.
Specific Treatment of Leprosy—C. W. Duval, New Orleans, La.
Vital Statistics in Sanitation—E. L. Green, Carpenter, Miss.
The Nutrition of Children—S. F. Hale, Mobile, Ala.
Functional Dyspepsias of Reflex Origin—Sidney K. Simon, New Orleans, La.

SYMPOSIUM ON SYPHILIS.

(Joint Session with Sections on Surgery and Ophthalmology.)

- The Study of Wassermann's Reaction in Congenital Syphilis*—L. R. DeBuys, New Orleans, La.
The Newer Methods of Diagnosis in Syphilis of the Nervous System—Roy Van Wart, New Orleans, La.
Lues of the Heart—J. B. McElroy, Memphis, Tenn.
Syphilis and the Eye—M. Feingold, New Orleans, La.
Syphilis—Joseph Hume, New Orleans, La.
Treatment of Syphilis—Toole and Scott, Birmingham, Ala.
... "606": Report of 250 Cases—J. O. Rush, Mobile, Ala.
The Technique of Intravenous Injection of "606"—A Plea for Its Use, and a Report of 407 Administrations—Edgar L. Ballenger, Atlanta, Ga.
Further Observations of Salvarsan on the Wassermann Reaction—William Litterer, Nashville, Tenn.
Eye Lesions After the Administration of "606," with Report of Case—J. C. O'Gwynn, Mobile, Ala.

Other papers, titles to be announced, by M. T. Gaines, Mobile, Ala.; W. S. Leathers, University, Miss.; Bryce W. Fontaine, Memphis, Tenn.; W. G. Somerville, Memphis, Tenn. (*Neurology*); H. M. Folkes, Biloxi, Miss.; E. Bates Block, Atlanta, Ga.; W. T. Pride, Memphis, Tenn.

SECTION ON SURGERY.

- Duncan Eve, Chairman, Nashville, Tenn.; Michael Hoke, Vice-Chairman, Atlanta, Ga.; W. P. McAdory, Secretary, Birmingham, Ala.
Chairman's Address—Duncan Eve, Nashville, Tenn.
Tuberculous Bladder—M. C. Shivers, Colorado Springs, Col.
Operative Treatment of Inguinal Hernia—L. Sexton, New Orleans, La.
Some Interesting Cases of Brain Surgery—Jere L. Crook, Jackson, Tenn.
Ligature Material and After-Treatment of Surgical Cases—H. T. Inge, Mobile, Ala.
Surgery in Epilepsy—W. A. Bryan, Nashville, Tenn.
Strains and Dislocations of the Sacro-Iliac Joints—Edward S. Hatch, New Orleans, La.
A Simple, Effective Surgical Technique—Ira J. Sellers, Birmingham, Ala.
The Importance of Proper Shoes: Their Relation to Deformities of the Foot and Body efficiency—E. Lawrence Scott, Birmingham, Ala.
The Prevention of Deformity by the General Practitioner; Report of Orthopedic Cases—Willis C. Campbell, Memphis, Tenn.
Local Anesthesia in Herniotomy—W. T. Henderson, Mobile, Ala.
Pistol-Shot Wound of the Left Ventricular Cavity, Without Hemorrhage. Exhibition of Specimen—Hermann B. Gessner, New Orleans, La.

Echinococcus Cysts of the Liver, with Report of Cases—W. Gillman Winthrop, Mobile, Ala.

Use of the X-Ray in Surgery—Amédée Granger, New Orleans, La.

The Present Status of Anesthesia—Clarence Hutchinson, Pensacola, Fla.

Fibroid Tumors of the Uterus—J. Hughes Carter, Memphis, Tenn.

The Early Diagnosis and Operation for Gall-Stones—Gaston Torrance, Birmingham, Ala.

Present Status of Gall-Bladder Surgery—W. R. Jackson, Mobile, Ala.

Surgery of the Gall-Bladder—E. C. Davis, Atlanta, Ga.

Diagnosis of Genito-Urinary Diseases, with Report of Cases—George R. Livermore, Memphis, Tenn.

Ureteral Calculi—W. T. Clary, Memphis, Tenn.

Report of a Case of Unusually Large Ureteral Calculus—J. N. Baker, Montgomery, Ala.

The Surgical Treatment of Congenital Pyloric Stenosis, with Report of Cases—G. E. Gavin, Mobile, Ala.

The Diagnosis and Course of Simple and Compound Fractures—R. J. McFall, Erin, Tenn.

Better Treatment of Fractures—W. F. Westmoreland, Atlanta, Ga.

Atypical Appendices in a Series of One Hundred Cases—W. R. McKinley, Columbus, Miss.

Appendicitis—Willis Jones, Atlanta, Ga.

Appendicitis—J. M. Wilson, Mobile, Ala.

The Abdominal Drain and the Through and Through Suture—H. A. Elkourie, Birmingham, Ala.

Peritonitis—Richard A. Barr, Nashville, Tenn.

Requirements for the Prescribing of Glasses—W. A. Stevens, Memphis, Tenn.

Nasal Reflexes—W. G. Harrison, Birmingham, Ala.

Operative Treatment of Non-Malignant New Growth in the Larynx—Richmond McKinney, Memphis, Tenn.

Edema of the Glottis—A. C. Lewis, Memphis, Tenn.

Other papers, titles to be announced, by W. M. Jordan, Birmingham, Ala.; W. M. Peters, Centreville Ala.; J. D. S. Davis, Birmingham, Ala.; L. B. Hudson, Hattiesburg, Miss.; J. A. Crisler, Memphis, Tenn.; Isadore Cohn, New Orleans, La.

SYMPOSIUM ON SYPHILIS, WITH OTHER SECTIONS.

SECTION ON OPHTHALMOLOGY.

M. M. Cullom, Chairman, Nashville, Tenn.; Richmond McKinney, Vice-Chairman, Memphis, Tenn.; U. S. Bird, Secretary, Tampa, Fla.

Chairman's Address—M. M. Cullom, Nashville, Tenn.

Cataract Extraction with Corneal Suture—E. C. Ellett, Memphis, Tenn.

The Relative Value of Atropin and Homatropin as a Cyclopegic—Hugh

M. Lokey, Atlanta, Ga.

The Modern Pathology and Treatment of Glaucoma—G. C. Savage, Nashville, Tenn.

Some Interesting Cases—M. H. Bell, Vicksburg, Miss.

Experiences in European Clinics—John L. Scales, Shreveport, La.

Demonstration of Pathological Specimens—M. Feingold, New Orleans, La.

Uric Acid and Indican Bearings on Diseases of Eye, Ear, Nose and Throat—James M. Guthrie, Meridian, Miss.

Tonsillectomy as Performed in the Charity Hospital, Service of Drs. Dupuy and DePoorter—Homer Dupuy, New Orleans, La.

Sympathetic Ophthalmia—U. S. Bird, Tampa, Fla.

Treatment of Trachoma by Massage, with Report of Cases—A. E. Maumenee, Mobile, Ala.

Other papers, titles to be announced, by H. H. Martin, Savannah, Ga.; Arthur I. Weil, New Orleans, La.; S. Kirkpatrick, Selma, Ala.; C. J. Landfried, New Orleans, La.; Richmond McKinney, Memphis, Tenn.; W. C. Lyle, Augusta, Ga.; A. B. Dancey, Jackson, Tenn.

SYMPOSIUM ON SYPHILIS, WITH OTHER SECTIONS.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION MET IN ANNUAL SESSION at Nashville, October 17-19. The attendance was approximately 300. The sessions were divided into a medical and a surgical section, the latter of which was rather more largely attended. Many exceptionally good papers were presented, among which those comprising the symposium on Visceroptosis excited the most interest, perhaps. Both the surgical and medical sections participated in this symposium. Among the guests by invitation were Dr. Suckling and Mr. Billington, of Birmingham, England, and Dr. Jos. Bryant, of New York. The visiting members were freely entertained by the profession of Nashville, Dr. J. A. Witherspoon being the chairman of the Committee on Arrangements. On the third day an excursion was made to the Hermitage, where a splendid oration was delivered by Dr. Witherspoon on the "Character of Andrew Jackson."

The following officers were elected for the ensuing year: Dr. Louis Frank, of Louisville, Ky., President; Dr. A. E. Sterne, of Indianapolis, Ind., First Vice-President; Dr. F. W. Werner, of Joliet, Ill., Second Vice-President; Dr. H. E. Tuley, of Louisville, Ky., was continued as Secretary and Treasurer. Chicago was selected as the next place of meeting, and the second week of October, 1912, assigned as the date.

Those in attendance from Louisiana were Drs. C. C. Bass and E. M. Hummel.

ATTAKAPAS SOCIETY MEETING.—The quarterly meeting of the Attakapas Clinical Society was held October 19, and the following officers were elected for the ensuing year: Dr. D. D. Mims, Crowley, President; Dr. I. T. Rand, New Iberia, First Vice-President; Dr. J. D. Hunter, Rayne, Second Vice-President; Dr. L. O. Clark, Lafayette, Secretary-Treasurer. Lafayette was selected for the next meeting, which will be held in January.

CLINTON PARISH MEDICAL ASSOCIATION.—The Parish Medical Association met in Clinton on October 5, with Dr. R. J. Jones,

Secretary, and Dr. J. W. Lea, President, and a small number of members, because of illness in the parish.

MEETING OF THE ASSOCIATION OF GRADUATE NURSES.—The first annual meeting of the Mississippi State Association of Graduate Nurses took place at the Natchez Hospital on October 4. A very successful and enjoyable meeting was held.

THE BOARD OF HEALTH of Independence, La., organized recently, with Dr. W. T. Newman, President and City Health Officer; Dr. E. L. Allen, Secretary and Sanitary Officer; Dr. F. Stafford, Dr. M. M. Thompson, Mr. W. N. Wilson, Mr. J. H. Strickland and Mr. James Stearn constituted other commissioned members of the Board.

THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION will meet at Washington, D. C., December 12-14.

HOOKWORM APPROPRIATION.—Dr. Sidney D. Porter, State Sanitarian, received \$100 from Rapides Parish for the purpose of establishing free dispensaries to assist in the eradication of hookworm disease. Seven other parishes have made appropriations for this purpose.

THE CANADIAN JOURNAL OF MEDICINE AND SURGERY may well be proud of its September issue. It is illustrated with between thirty and forty pages of half-tones and altogether forms a valuable number. The JOURNAL extends its congratulations.

"A SAFE AND SANE FOURTH OF JULY."—The campaign for a "safe and sane" celebration of the Fourth of July has been effective of good results, as is indicated by the casualty statistics of the national holiday. In 1903 the number of Fourth of July accidents was 4,449, causing 446 deaths and 3,983 non-fatal injuries. In 1909 the number of accidents was larger, 5,092, but there were only 215 deaths. Since that time a greater number of cities and towns have adopted restrictive methods, and in 1911 the number of Fourth of July accidents fell to 1,603, causing only fifty-seven deaths and 1,546 non-fatal injuries.

THE NEW YORK SKIN AND CANCER HOSPITAL LECTURES.—This hospital announces a course of free lectures on Skin Diseases by Dr. L. D. Bulkley in the outpatient department from December 20, 1911.

TOURO NURSES GRADUATE. — Fourteen graduated nurses of Touro Infirmary were presented with diplomas on September 30. The addresses were made by Dr. Leucht, Dr. Isadore Dyer and Dr. E. S. Hatch. The graduates were: Misses Annie Laurie Brown, Mabel P. Burtch, Irene Butler, Jo Carr, Gertrude M. Carter, Eula Moore Clark, Cola Dickinson, Fannie Day Exum, Kate P. Hess, Frances Kelley, Carrie Geneva Megginson, Martha Stephenson, May Stinson and Tillie A. Topham.

THE AMERICAN PUBLIC HEALTH ASSOCIATION MEETS IN HAVANA.—The thirty-third annual meeting of this association will be held in Havana, December 5 to 9, 1911. The local committee of arrangements is represented by Dr. Fedrico Torralbas, Tejadillo 36, Havana, Cuba, and to him all communications should be addressed. An excellent program is assured, and Havana at the season of the year selected for the meeting is delightful. Steamships sail for Havana from New York on Thursdays and Saturdays; from Port Tampa on Sundays and Thursdays; from Knights Key on Thursdays, Sundays and Tuesdays; from New Orleans the Morgan Line (Southern Pacific) steamers leave every Saturday, arriving in Havana Monday. The headquarters of the association will be the Hotel Sevilla, and general meetings will be held near by. Elaborate entertainments are announced and several hotels are listed at reasonable rates.

PERSONALS.—Drs. R. Matas, Solon G. Wilson, C. Jeff Miller, H. E. Menage, J. D. Weis, A. C. Eustis and M. Couret have returned from Europe.

Dr. A. A. Keller was elected the physician of the Associated Employees for the Sewerage and Water Board.

REMOVALS.—Dr. Theodore Engelbach, from Grand Isle, La., to 816 Third street, New Orleans.

Dr. A. Lafleur, from Opelousas, La., to Ville Platte, La.

Dr. M. Foster, from Shreveport, La., to Oktaha, Okla.

Dr. T. D. Boaz, from Lake Charles, La., to Shreveport, La.

Dr. J. L. Violet, from McElroy, La., to Baton Rouge, La.

Drs. J. B. Guthrie, I. I. Lehmann and Randolph Lyons have established the Clinical Laboratory in their new offices in the Maison Blanche Building, New Orleans.

MARRIED.—On October 11, 1911, Dr. Dix Henry Alverson to Miss Genevieve Lynch Clark, both of Newellton, La.

DIED.—On September 28, 1911, Dr. R. L. Williams, Natalbany, La., aged 34 years.

On October 4, 1911, Dr. J. P. Taylor, of Homer, La.

On October 12, 1911, Dr. L. D. Archinard, one of the leading dentists of the city and professor of operative dentistry, dental pathology and theapeutics in Tulane University.

TULANE NOTES.

The Medical Department opened on October 2 with all departments in active operation. The Preliminary Year numbers 23 matriculates; the Freshman Year, 57; Sophomore Class, 64; Junior Class, 76, and the Senior Class, 132. The attendance is, altogether, about forty less than last year, which was anticipated on account of the standard of entrance and advancement.

The Post-Graduate Department, the New Orleans Polyclinic, although opening two weeks earlier than ever before, has a larger number of matriculates than usual, which seems to promise that the session will be a prosperous one.

Speaking of the new Department of Tropical Medicine and Hygiene, the *Southern Medical Journal* gives editorial notice in its October number. This journal notes the importance of adequate instruction in tropical diseases, and refers to the work which has already been undertaken at the Mobile division of the Alabama University and at other Southern schools. It emphasizes the importance of Tulane as a finishing school, and, with the opportunities offered in the Medical Department and in the Polyclinic for laboratory and clinical instruction, the American student ought to find a place in New Orleans for his education in these subjects. The editorial concludes with an appeal to Southern philanthropy: "Wealthy men can find fewer finer opportunities for the profitable investment of surplus bonds than in endowing such a school of tropical medicine at Tulane, or at any other Southern university. Its graduates would constitute an army of sentinels whose skillful work would go far to protect the country against the epidemics

that constantly threaten our communities with panic, loss, disease and death. What better monument can any man rear to his own memory and the honor of his descendants than a school of tropical medicine bearing his name? There it would stand, a bulwark against misfortune to his countrymen, long after busts of bronze are broken and marble tablets crumbled into dust."

The attendance in the Pharmacy Department numbers 26, with an equal division of students in the Junior and Senior Classes. This department has been materially improved with facilities offered in the practical and laboratory branches which almost double the requirements of the National Syllabus.

Courses have been provided for physicians attending the New Orleans Polyclinic, or the Post-Graduate Department of Tulane, through which matriculation for general lectures in the regular college work may be undertaken with the Polyclinic work, offering a broader opportunity to the physician visiting the university for the purposes of review.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of respective publications. The acceptance of a book implies no obligation to review.

The Anatomical Histological Processes of Bright's Disease. By HORST OERTEL, M. D. W. B. Saunders Company, Philadelphia and London.

Five splendid lectures on the diseases of the kidney, ordinarily grouped as Bright's disease, delivered at the request of the resident staff of the New York City Hospital in the Russell Sage Institute of Pathology.

These lectures were not intended as an exhaustive treatise on the subject, but to familiarize the hearer and the reader with the fundamental facts and to give him a base for our own thought and research. They present a model and set an example for teaching pathological anatomy to clinicians in a scholarly manner. Some well-intended criticism, by the way, of our educational deficiency in pathological anatomy is spread over three pages. The darts are well aimed by the erudite lecturer, and we must admit that the black "sore spots" were again hit. Of the many

remarks on the subject, one quoted here will present a resumé: "It is to be regretted, therefore, that unfortunate circumstances still make it impossible to conduct most of our large hospitals as academic institutions."

It should have been proper, on the other hand, to state in all fairness how America is forging her way ahead in medical education and how certain it is that America, in medicine as well as it is now in surgery, shall be among the leaders at not a very distant time. In these yet unsolved problems of renal inflammations of the kidney we are all anxious to connect and understand what we see at the bedside and at the autopsy table. These lectures will cultivate such a desire for more knowledge on this particular subject.

The lithographic plates are remarkably distinct, and, besides these macroscopic, there are over forty microscopic preparations, very clearly printed.

As to the purely mechanical features of the book we have but praise to utter
E. M. D.

A Treatise on Diagnostic Methods of Examination. By PROF. DR. HERMANN SAHLI. W. B. Saunders Company, Philadelphia and London.

This is the second revised edition, the authorized translation from the fifth revised and enlarged German edition of the distinguished Swiss clinician's work.

The American editor, Nathaniel Bowditch Potter, Assistant Professor of Clinical Medicine at Columbia University, etc., states that this second edition is an accurate translation. The mistakes that crept into the first translation have been corrected and further editorial comments have been added. Several new diagrams and cuts have been inserted.

This work, indeed, is all that its title of treatise should imply, in fullness, completeness and systematic exposition. It is in the line of those didactic, well-finished books for the training of the physician, and, when out facing a problem, the practitioner can refer to it as a judge of supreme court, as it were.

The extensive alterations and complete revision of the latest German edition have made of the work a new work. The author insists upon the fact that it is not only a compilation, but that critical discussion is freely engaged in and original ideas, thoughts and devices exposed. It is amazing to the quick and ambitious how much a practitioner should know; but a book like this is a help and an encouragement. As to the lazy and sluggish, it is a blessing if this book has the effect of scaring him away from the ranks of a profession which must, as ever before, be the privileged property of the cultured only.
E. M. D.

Medical Diagnosis. By JAMES M. ANDERS, M. D., etc., and L. NAPOLEON BOSTOO, M. D., etc. Octavo of 1,195 pages, with 443 illustrations, seventeen in colors. W. B. Saunders Company, Publishers, Philadelphia and London, 1911.

The same substantial method which characterizes Anders' "Physical Diagnosis" is here again developed. It requires hard work to carry it out, but it repays from the knowledge derived.

New features have rendered this book most valuable, namely, brief pathogenic definitions of special diseases, selected illustrative cases, actual cases, numerous diagnostic tables, summary of diagnostic features, laboratory diagrams, and last, but not least, profuse illustrations, photo-

graphs and colored plates, so that the technic of procedure is well pictured, and thus better grasped. The moving pictures of various cases of scleroses by Mr. Sigmund Lubin, of Philadelphia, are inserted in the book and form one of the most attractive new features mentioned. Of course, the aim was to include all new sources to aid in medical diagnosis, and to do so in a single volume is almost impossible, not omitting a few small things, even though important. Thus, regarding hookworm, affecting mostly children, and quite often, in a mild way, just a note should have been inserted under this head to advise use and exhibition of some anthelmintic (calomel or male fern) to search for and find the worm, the search being kept up for four and six days. Such note exists in Sahli's diagnostic methods. E. M. D.

Surgical Anatomy. By WILLIAM FRANCIS CAMPBELL, M. D. W. B. Saunders Company, Philadelphia and London, 1911.

A treatise of this kind is always welcomed, as it combines the groundwork of surgery—*anatomy*—and the practical bearings pertaining thereto. Especially is Campbell's book worthy of a place on our shelves, for it can be read with great profit from cover to cover, including the dedicatory and the two prefaces.

The type and paper are of the best, the binding attractive, and the text, with numerous elucidating illustrations, a real treat.

The collaborators of Dr. Campbell certainly deserve their share of praise and thanks.

We note on page 437, relative to the tail of the pancreas, that it has "an anterior or abdominal surface which is *intrapertitoneal*." (Italics ours.) It seems to us that "*covered* with peritoneum" would be more correct than *intrapertitoneal*.

On page 408, referring to the anatomy of the appendix, we read these important lines: "Note the additional blood supply in the female, through the ligament of Clado. Does this not suggest the cause of the greater immunity against appendicitis which the female possesses?" LARUE.

Plaster of Paris. By MARTIN W. WARE, M. D. The Surgery Publishing Company, New York, 1911.

This epitome on "Plaster of Paris and How to Use It" is a practical little book abounding with good illustrations on the subject. We especially noted the chapters on the ambulatory cast and the Balot bandage.

We purposely quote the following from another chapter: "Of recent date the teaching has gained ground to apply plaster of Paris dressings to the members rendered flaccid by infantile palsy and forestall the contractures. To be effective, such plaster casts should be applied very early in the disease—as soon as the aggressive stage has been reached. The plaster casts constitute a tentative treatment prior to the performance of an arthrodesis or facilitating the execution of a tendo-plasty eventually." LARUE.

One Thousand Surgical Suggestions. By WALTER M. BRINCKNER, B. S., M. D., and others. Surgery Publishing Company, New York, 1911.

Four years ago we reviewed the Five Hundred Suggestions, and two years later the book containing 700 surgical suggestions by the same

authors. We have before us their 1,000 suggestions, all from a surgical standpoint.

After glancing over same we must admit that there are many beacon lights which will help us out in surgical distress. A perusal of this book once in a while will amply repay for the time spent. LARUE.

Surgical After-Treatment. By L. R. G. CRANDON, A. M., M. D. W. B. Saunders Company, Philadelphia and London, 1911.

This is a timely and useful work, every chapter of which can be read and often consulted with profit in these busy days of surgery.

We all will agree that hospital training is of prime importance to the surgeon. Unfortunately all students, in fact, the majority, cannot procure this special privilege, so they are somewhat hampered in following up that very important feature—surgical after-treatment.

This work of Crandon, who has been very ably aided by collaborators, will thus fill the lacuna, not only for those who have not had the opportunities of hospital life, but even for the trained students and physicians, at whom the author aptly hints in his preface. We heartily recommend this book to the profession. LARUE.

Practical Medicine Series. By DRS. AULT and REDLON. The Year Book Publishers, 1910.

In reviewing the orthopedic or surgical portion of this seventh volume of the Practical Medicine Series we can but reiterate what we said previously about this particular publication. It has come to stay, for it is needed, presenting, with its world-wide scope, to one half of the world what the other half is accomplishing, medically and surgically, in deed and thought. LARUE.

The Principles and Practices of Bandaging. By DR. GWILYM G. DAVIS, M. D. P. Blakiston's Son & Co., Philadelphia, 1911.

This little volume of 120 pages has been written mainly for beginners in medicine and others not belonging to the profession.

It can, however, be profitably thumbed by some practitioners, as a nicely-fitting bandage is usually the exception.

We believe the author could have properly mentioned, even with illustrations, the extensive use, made nowadays, of the surgeon's plaster, especially Z. O. (zinc oxid) plaster as an adjunct to bandaging. LARUE.

Manual of Surgery. By FRANCIS P. STEWART, M. D. P. Blakiston's Son & Co., Philadelphia, 1911.

We reviewed a few years ago Stewart's first edition of this work, which has been thoroughly revised and made squarely up to date in the second edition. It is a good book for both students and physicians. The text, condensed as it should be in a manual, is clear and concise. It is, verily, as the author states in the preface to the previous edition, "stripped of verbiage and unessentials."

There are more than 600 pages of reading matter, with almost the same number of illustrations. LARUE.

International Clinics. Vol. II. Twenty-first series, 1911. Edited by HENRY W. CATTELL, A. M., M. D. J. B. Lippincott Company, Philadelphia and London.

For those who may not know yet the International Clinics are a quarterly of illustrated clinical lectures and especially prepared original articles on treatment, medicine, surgery, neurology, pediatrics, obstetrics, gynecology, orthopedics, pathology, dermatology, ophthalmology, otology, rhinology, laryngology, hygiene and other topics of interest to students and practitioners by leading members of the medical profession throughout the world.

This second volume of the twenty-first series, 1911, is replete with substantial articles, only two of which, when mentioned, can show the practical aspect of this volume of lectures: First, the technic of the intravenous administration of Salvarsan, with comments and points, by B. A. Thomas, professor of genito-urinary surgery in the Philadelphia Polyclinic Hospital, etc.; and, second, wounds, by William S. Wadsworth, M. D., coroner's physician, Philadelphia.

Both articles are remarkably well illustrated. Illustrations, as every one knows, not only attract attention, but demonstrate so many details that would otherwise escape in reading a merely verbal description.

E. M. D.

Diagnostic and Therapeutic Technic. By ALBERT S. MORROW, A. B., M. D. W. B. Saunders Company, Philadelphia and London, 1911.

The object of collecting and arranging, in a manner easily accessible for reference, a large number of procedures employed in diagnosis and treatment, which are scattered in books and journals, is certainly a most useful one, not only to the specialists, but to the hospital interne and the general practitioner.

The author claims, and rightly so, that no single book exists to which one may turn for information along these lines. Each procedure has been given in detail, leaving nothing to the reader's imagination. All important steps have been illustrated. There are 815 illustrations, mostly original.

E. M. D.

Laboratory Studies in Tropical Medicine, by C. W. DANIELS, M. D. (Camb.), M. R. C. P. (Lond.), and H. B. NEWHAM, M. R. C. S. (Eng.), etc. Third edition. P. Blakiston's Son & Co., Philadelphia, 1911.

The conquest of the tropics is the most important event in the history of medicine since bacteriology came into being. The prevention of the diseases that have depopulated millions of square miles of fertile lands and deterred the white races from attempting to colonize them is a matter fraught with the gravest consequences to mankind. One after another the dreaded infections of the tropics are giving up their secrets to the microscope, and the disclosure of the enemy's position is but the prelude to his vanquishment.

Tropical medicine is everywhere receiving the attention it deserves. The text-books on the subject are multiplying and are keeping abreast of the advance constantly being achieved. Practical work is the most important part of the education of the trained worker in this field. Laboratory guides, therefore, are correspondingly more important in this line of study, and the one before us is well adapted to the needs of the physician who desires to instruct himself in tropical diseases, either in a well-ap-

pointed laboratory or in a laboratory erected by himself in his tropical home.

Dr. Daniels' work gives full directions for staining blood, working with the microscope, etc., and descriptions of blood parasites and their habits. He devotes nearly two hundred pages to a description of the structure and habits of the insects that are chiefly concerned in carrying tropical infections. It is needless to give a detailed description of Drs. Daniels' and Newhau's book, for such a description would lead us into every phase of laboratory work. Of course, we do not look for clinical and therapeutical chapters in a book that is professedly a laboratory guide, but in its sphere it is admirably adapted to the needs of the worker in the growing field of tropical medicine.

McSHANE.

Practical Cystoscopy. By PAUL M. PILCHER, A. M., M. D. W. B. Saunders Company, Philadelphia and London, 1911.

This very valuable work consists of an introduction, covering the indications for the use of the cystoscope, and seven parts: First, the technic of cystoscopy; second, diseased bladder; third, diseases of the prostate; fourth, diseases of the ureter; fifth, the functional activity of the kidneys; sixth, diseases of the kidney; seventh, the therapeutic uses of the cystoscope. Of course, each part has its appropriate subdivisions, and is exhaustively treated. The last part is the only one dealing with treatment, and that is to a limited extent, but the purpose of the book—a clear statement of the indications for cystoscopy and the technic for carrying it out—has been admirably fulfilled.

We wish space permitted a notice more in detail, and heartily recommend the book to those interested in the subject.

In the table of contents, part seven is made to appear as part eight. There are 233 illustrations, of which 29 are in color and all are good.

C. C.

A Practical Medical Dictionary. By THOMAS LATHROP STEDMAN, A. M., M. D. Wm. Woods Company, New York, 1911.

A convenient lexicon, which is neither cumbersome nor heavy, though consisting of one thousand pages. It includes the words used in medicine and its collateral branches, with their derivation, pronunciation and synonyms; also pharmaceutical preparations official in the United States and the British pharmacopeias, as well as in the National Formulary, in all about 50,000 titles.

The illustrations are not numerous, but clear and well selected. The type, while necessarily not large, is very clear and readable. The binding is flexible leather, and the volume, which is, all in all, very creditable, is furnished either with or without thumb-index.

C. C.

Publications Received.

P. BLAKISTON'S SON & CO., Philadelphia, 1911.

A Pocket Medical Dictionary, by George M. Gould, A. M., M. D.

J. B. LIPPINCOTT, Philadelphia and London, 1911.

International Clinics. Volume III, Twenty-first Series, 1911.

LEA & FEBIGER, Philadelphia and New York, 1911.

Surgical Applied Anatomy, by Sir Frederick Treves, G. C. V. O., LL.D., F. R. C. S. Sixth Edition, Revised, by Arthur Keith, M. D., LL.D., F. R. C. S.

MISCELLANEOUS.

Some Valuable Data. (The Purdue-Frederick Company, New York.)

Reprints.

Stomach Disorders Requiring Surgical Intervention from the Viewpoint of an Internist; Report of a Case of Carcinoma of the Splenic Flexure of the Colon Treated With the Neo-farmane Vaccin, by Charles D. Aaron, M. D., Sc. D.

Therapeutic Drainage in 185 Cases of Uterine Obstruction; Vagino-ureterostomy After Nephrectomy for Pyonephrosis Due to a "Sigmoid" Construction of the Ureter; Delayed Menopause; Panhysterocolpectomy; Complete Excision of the Vagina for Prolapse of the Bladder, by A. Ernest Gallant, M. D.

Extraction of Foreign Bodies From the Eye With the Corneal Curette, by John M. Wheeler, M. D.

Ozène, Nutrition et Respiration, par le docteur Marcel Natier.

Five Illustrated Cases of Primary Melanosarcoma of the Choroid, by J. H. Woodward, B. D., M. D.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans
FOR SEPTEMBER, 1911.

CAUSE.	White.	Colored.	Total.
Typhoid Fever.....	4	2	6
Intermittent Fever (Malarial Cachexia)	1	4	5
Smallpox.....			
Measles.....	1		1
Scarlet Fever.....			
Whooping Cough.....	5	4	9
Diphtheria and Croup.....		2	2
Influenza.....	1		1
Cholera Nostras.....			
Pyemia and Septicemia.....			
Tuberculosis.....	32	33	65
Cancer.....	10	9	19
Rheumatism and Gout.....			
Diabetes.....	4		4
Alcoholism.....			
Encephalitis and Meningitis.....	1	1	2
Locomotor Ataxia.....			
Congestion, Hemorrhage and Softening of Brain.....	12	5	17
Paralysis.....	4	1	5
Convulsions of Infants.....	1		1
Other Diseases of Infancy.....	14	8	22
Tetanus.....	3	4	7
Other Nervous Diseases.....	5	1	6
Heart Diseases.....	37	39	76
Bronchitis.....	1	2	3
Pneumonia and Broncho-Pneumonia.....	17	20	37
Other Respiratory Diseases.....	2		2
Ulcer of Stomach.....			
Other Diseases of the Stomach.....	3	4	7
Diarrhea, Dysentery and Enteritis.....	36	13	49
Hernia, Intestinal Obstruction.....	8	2	10
Cirrhosis of Liver.....	8	5	13
Other Diseases of the Liver.....	3		3
Simple Peritonitis.....	1	1	2
Appendicitis.....	3	1	4
Bright's Disease.....	34	16	50
Other Genito-Urinary Diseases.....	10	5	15
Puerperal Diseases.....	3	3	6
Senile Debility.....	5	1	6
Suicide.....	1		1
Injuries.....	26	10	36
All Other Causes.....	23	15	38
TOTAL	319	211	530

Still-born Children—White, 19; colored, 22; total, 41.

Population of City (estimated)—White, 272,000; colored, 101,000, total, 373,000.

Death Rate per 1000 per annum for Month—White, 14.07; colored, 25.07; total, 17.05.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure..... 30.03
Mean temperature..... 83.00
Total precipitation..... 5.43 inches.
Prevailing direction of wind southeast.

New Orleans Medical and Surgical Journal.

VOL. LXIV.

DECEMBER, 1911.

No. 6

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

The Muscle Tuck Operation, as Adopted at the Eye, Ear, Nose and Throat Hospital, New Orleans.

By T. J. DIMITRY, M. D.,

Lecturer in Diseases of the Eye, New Orleans Polyclinic; Assistant Surgeon, Eye, Ear,
Nose and Throat Hospital.

The tucking operation to which I wish to call your attention is that used in the Eye, Ear, Nose and Throat Hospital by Dr. H. Dickson Bruns, the surgeon in charge of the Eye Department, and his assistants. It was first described by Dr. Bruns in a paper entitled "A Method of Advancing the Tendons of the Recti Muscles," published in the *Ophthalmic Record* of June, 1904. In that paper it is said to have been evolved by Dr. Bruns and the first assistant surgeon of the department, Dr. E. A. Robin, by a thorough sifting of the many proposed procedures—the elimination of all details proven useless, and the holding fast to those found to be good. Originality is claimed only for the making fast of the tuck in the tendon by means of the "guy suture" and the method

of closing the conjunctival wound with that same thread. After long trials in this clinic, where many muscle operations are performed, the simplicity and exactness of the technic and the results obtained have proven entirely satisfactory.

In presenting these diagrams for your consideration I find that nothing assists so materially in making clear a technic that otherwise would appear very difficult. As a lecturer at the New Orleans Polyclinic, and having on different occasions attempted to bring out steps of the operation, I found nothing to assist so agreeably as drawings.

The advantages of this operation over those of a resection or advancement will not be discussed, for I merely desire to show the operation as we find best at this clinic. This tuck operation may appear difficult, but if one will carefully consider the details it can be done in a very few moments and free from any serious accidents.

The other operations, that provide for a shortening of the tendon, are either resections of a part of the tendon or a simple advancement. Both operations necessitate the cutting of the muscle, and it is this cutting that occasions at times the greatest trouble.

The tuck instrument plays the important part, and is that of Dr. Clark, of Columbus, Ohio, and with certain modifications as we use it. It is shown in Fig. No. 1. The instrument, when taken apart, is shown in Figs. 2, 3, 4. This instrument provides for the pulling of the flattened tendon through two immovable hooks, by another movable hook, that in this way produces a loop and a proportionate shortening of the tendon. Fig. No. 2 shows the movable hook, shaped like the figure 7, and has a small aperture in the end of the smaller part of the figure. This aperture is used for the passing of what we designate as a guy suture, which is explained as we proceed. The longer part is serrated and fits between the two stationary hooks and is drawn in by screwing the little olive shaped nut. Fig. 3 shows the two stationary and the little olive-shaped nut. Fig. 4 shows how easily the handle can be removed from the instrument, and, with this end removed during the operation, one could sit upon table and measurements made as to whether the amount tucked is too great or too little. The diagrams of the other parts are self-explanatory.

The operation is always done under local anesthesia, unless it

be a very young child. The anesthetic used is the same that we have found so generally useful, and to-day we very seldom resort to general anesthesia. As a matter of interest, most all operations at this clinic are performed under local anesthesia, such as iridectomy, enucleation, sac extraction, etc. This anesthetic has been of great assistance, as it has removed the usual fear from the use of general anesthesia. The solution used is that of Robin's "10-10-20," which consists of 10 minims of a 4 per cent solution of cocain, 10 minims of 1-1000 solution of adrenalin chlorid and 20 minims of normal salt solution. Ten to twenty minims are injected under the conjunctiva, and in about eight minutes the operation is proceeded with.

One usually carefully washes the conjunctival folds after having instilled argyrol, flooding same very freely, and particularly under upper lids, with a saline solution. It is the belief at the clinic that a good saline wash is superior to any antiseptic that can be used in the eye.

Fig. No. 5 shows speculum introduced and a nick being made into conjunctiva and Tenon's capsule. This nick, which is about six m. back from the limbus, is enlarged vertically and provides for the exposure of the muscle. Fig. 6 shows the scissors being used to free the surrounding membranes and fat from the muscle, for this must be carefully done, for any small strands of tissue will interfere with the tucking of the muscle.

Fig. 7 shows tenotomy hooks introduced on each side after the muscle has been carefully freed. Fig. No. 8 shows the use of the hook and the manner in which it is inserted. The sliding or larger hook (Fig. No. 2) is put beneath the muscle and the two stationary hooks are on top of the muscle. Fig. No. 9 shows muscle pulled through the stationary hooks, which is occasioned by screwing up the little olive-shaped nut.

Now that the tuck is produced, it becomes necessary to tie muscle in this position. Fig. 9 shows the way needle is passed under the two double hooks and through the middle of the width of the muscle. The needle carries a double thread through, and afterwards it is removed by cutting off the needle. This provides thereby for two threads, one tying one section of the muscle and the other another section. This thread is usually white, and about a No. 7 is used. These threads remain buried, and should be care-

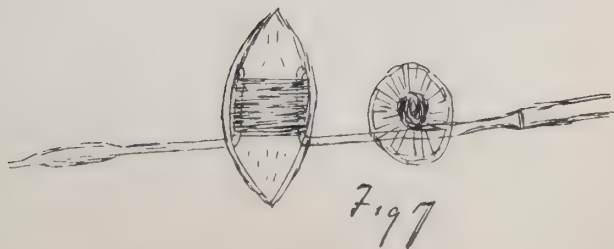
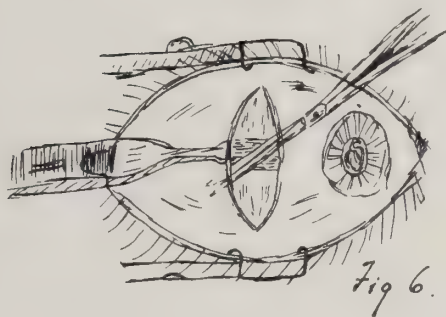
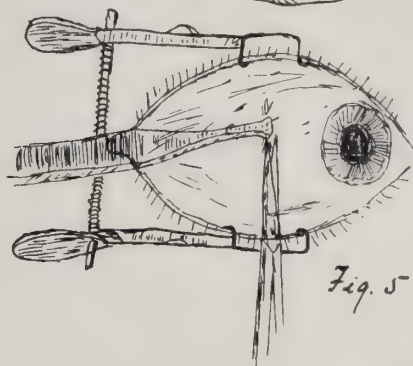
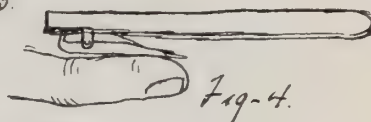
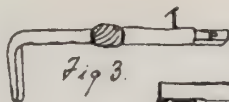
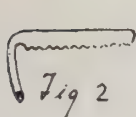
fully and tightly tied. Before inserting these sutures one should regulate the exact amount of tuck desired, and, with the handle removed, the patient can sit up and a study of the condition of the eye may be considered.

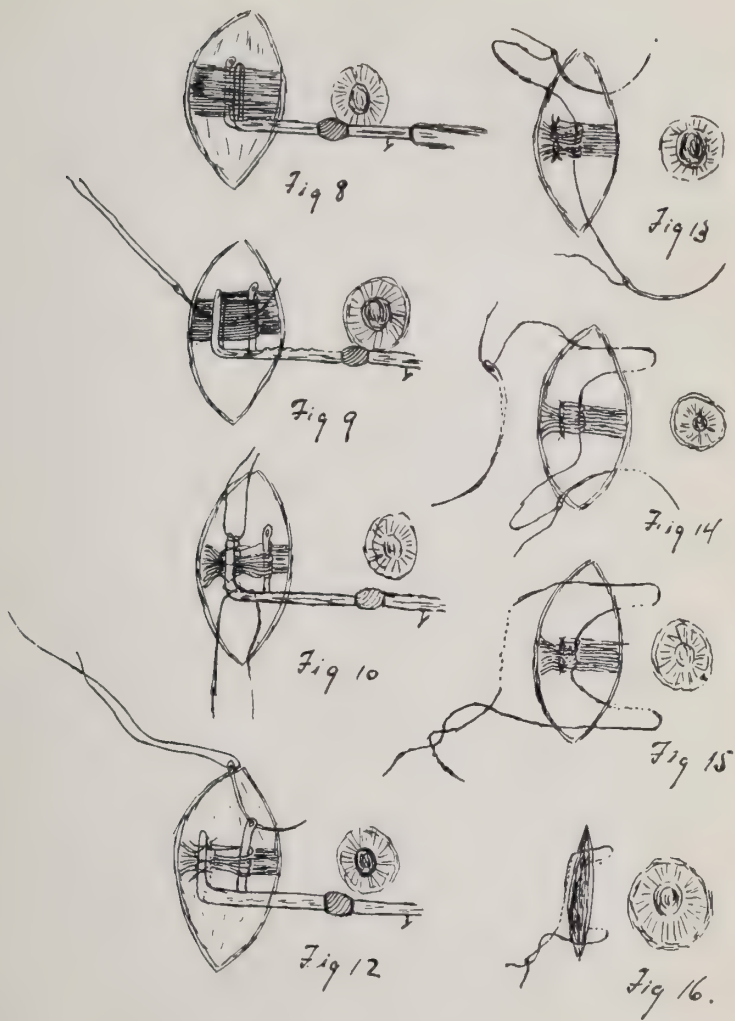
One desires to tie knots under the stationary hooks. Fig No. 10 shows the manner in which threads are tied. Before pulling the Clark's hook out from under tuck, the guy suture is passed into the small aperture of the movable hook, as shown in Fig. 12, so that when the hook is removed the thread is carried through the part of the tendon that is tucked—Fig. No. 13. The thread is usually black, and a No. 7 is used.

With the guy sutures pulled through the tucked tendon, a needle is now put on each end of the thread, and each needle is inserted in such a way into conjunctiva so as to provide for a flattening of the tucked tendon and the drawing together of the vertical wound. This drawing together of the vertical opening really pulls forward the capsule of Tenon and the conjunctiva. Figs, 14, 15 and 16 show way in which these stitches are passed and the effect after being tied. The tying is usually a little below the center of the cut, and the folding of the conjunctiva acts as a good protection for the cornea. The knot is lower than the cornea, and under the lower lid. This suture is designated as a guy suture for the tuck tendon, can be easily moved up or down on the bridge, and always pressed straight and regulated easily by a pull in any direction.

The results had in this operation have been most gratifying, for it is not an unusual thing to establish binocular vision, and the outcome is usually perfect.

The diagrams will explain much to many that are using other methods, and, should I succeed to have them try this technic, and at the same time making the operation clear, I shall be much gratified.





The Administration of Nitrous Oxid Ether Sequence by the Open Method.*

By ANSEL M. CAINE, M. D., New Orleans.

I feel justified in reporting this method of administering ether in sequence to nitrous oxid, because it is the safest of all sequences. We first used this for children, for a quick anesthetic is what is specially needed with them. Children object to any formidable-looking face-piece, or one that it is necessary to apply firmly to the face. Any safe method of quickly rendering unconscious, without terrifying the child, is a step forward. We have this when we use nitrid oxid ether sequence by the open method.

We use a Gwathmey mask, which we cover with about sixteen thicknesses of surgical gauze. A yoke is attached to a cylinder of nitrous oxid, and this is connected with the mask by a piece of rubber hose about six feet long. It is better to run the gas through a warmer, as it is ice-cold when released from the cylinder.

We reassure the patient and explain what they are to expect, showing the mask and allowing a puff of gas to flow, so that they hear it. We then apply the mask to the face, tell the patient not to be uneasy when he feels the flow over his face, and then turn on the gas, allowing it to flow in as even a stream as possible. When the patient is unconscious, or nearly so, which we determine by the breathing, we add ether by the drop method, gradually increasing it and decreasing the flow of nitrous oxid at the same time. We are careful not to let the patient be deprived of enough oxygen to cause jactitation. As soon as the patient is fairly under ether we discontinue the nitrous oxid and continue the ether by the drop method, or by the use of the little apparatus described by me before this Society last year.

We make the following claims for the method, after having used it over 600 times:

1. It is comparatively safe.
2. It is quick.
3. It is not unpleasant.
4. It acts equally as well in adults as in children.
5. Patients prefer it to ethyl chlorid, and it is far safer, though much more transient.
6. It reduces, slightly, the time to surgically anesthetize with ether by the open method.

* Read before Orleans Parish Medical Society, October 23, 1911.

Remarks on Prolapse of Uterus.*

By WM. KOHLMANN, M. D., New Orleans.

Many patients date the beginning of the prolapse back to a confinement, and it was for some time the opinion of prominent writers, as Veit, Schroeder, that, on account of insufficient involution of the puerperal hypertrophy of the genital organs, the prolapse of the vagina, independent of displacement of the uterus, increases in size and gradually draws the uterus down. Others have drawn attention to the importance of the retroflexion of the uterus in the etiology of the prolapse, especially Schultze, who said, "The etiology of the prolapse is the same as of the retroflexion."

In recent years the muscular structures of the pelvic floor are considered of utmost importance. Halban and Tandler have tried to prove that the so-called suspensory apparatus of the uterus—as peritoneum, muscular and fascial ligaments for the fixation of the uterus—is only of slight importance. According to their observations, it is mainly the muscular floor of the pelvis which protects the internal organs. Have these muscles become deficient, either by relaxation or by tear, a condition develops not unlike a hernial opening, and the internal organs protrude on account of the intra-abdominal pressure through this opening.

Based on this theory of recent years, the levator suture has been considered of extreme value in the surgical treatment of the prolapsed uterus. Some operators report good results from this suture only; for instance, Heidenhain reports the cure of a number of cases of prolapse by levator suture alone, without any fixation of the uterus. He operated thirty-eight cases, with only two recurrences. But, as clinical observation proves, the normal position of uterus and bladder is not simply due to the support of the pelvic floor, neither muscular nor fascial pelvic floor.

The uterus is held in position, most probably, by a distribution of fascial and muscular tissue, which envelop the uterus from both sides and the back, the so-called ligaments cardinalis and sacro-uterine. Clinical observation shows the effect of these ligaments on the uterus. If in healthy women, by means of a Sims speculum, the cervix uteri is exposed, and in that way the supporting effect of the pelvic floor is eliminated, we can see, by bearing

* Read before Orleans Parish Medical Society, October 23, 1911.

down or coughing, that the cervix descends, but that the uterus soon returns to the normal position, on account of the elastic properties of the above-mentioned ligaments. Similar descensus of the cervix is seen during respiration. If these ligaments are deficient, the same phenomenon takes place, as far as the descending of the bladder and cervix are concerned; but, if the pressure ceases, the organ does not return to normal position.

We can show the same condition in a different way. If we pull the cervix down by means of a tenaculum forceps it follows by the slightest pull, but gradually there is more and more resistance felt. As soon as we release the cervix the uterus draws back. We can see here, too, the effect of ligaments independent of the pelvic floor, and not noticeable in a prolapse of uterus.

The same condition is demonstrated by vaginal hysterectomy. After opening anterior and posterior cul-de-sac, the fundus uteri can be drawn down through the anterior and posterior opening, but the cervix uteri cannot be moved until the elastic tissue surrounding same is divided. If we divide the pelvic floor by deep incision, as, for instance, Duehrsen or Schuchardt incisions on both sides, the pelvic floor will be relaxed, but the uterus will not be more movable than before. As soon as the tissues around the cervix of the uterus and sacro-uterine ligaments are divided, the uterus moves downward.

We meet pathological conditions which prove, too, the necessary presence of a special fixation apparatus of the uterus. If we have a prolapse of the uterus in a multiparous woman, and the pelvic floor is intact, the descensus is due to a deficiency in the supporting ligament of the uterus. In cases of complete tear of the perineum, or in cases of excision of large parts of vagina and vaginal orifice on account of carcinoma of vaginal walls and Bartholin's gland, we do not observe a descensus or prolapse of the uterus even after years.

The insufficient result, in many cases of prolapse, by perineal suture alone, may prove, in many instances, that an independent suspensory apparatus of the uterus is necessary. Notwithstanding the perineal suture is perfect, the uterus descends and gradually protrudes again through the vaginal outlet. In such cases the results improve after fixation of the uterus in ante flexion.

After all, a thorough repair of the pelvic floor is of greatest

importance in the treatment of this abnormal state. Surgery, so far, has not been too successful in its treatment; there is hardly a single method of operation suitable for all cases of descensus and prolapse of the uterus in general.

It may be said that in cases of retroflexion and marked descensus of the uterus, especially in younger women, a repair of the perineum with special suture of the levator muscle, in combination with some method of ante-fixation of the uterus, Alexander-Adams preferred, should be the operation of choice.

In case of total prolapse of the uterus combined with descensus of the bladder, I believe that the operation as designated by Wertheim and improved by Schauta, and known in this country as Watkins' operation, is to be highly recommended, especially in women beyond the menopause.

In the last two years about fifty cases of descensus and prolapse have been operated in my service. I am sorry that in their history no special mention was made if the uterus was in retroflexion or in normal ante-position.

The immediate results have been very good. Of course, the time is rather short yet to exclude any future recurrence, though in my own experience the recurrence shows very early, some after only a very few weeks. One case showed a recurrence six weeks after operation, I think most probably due to the poor result of the perineal repair. I have examined about fifteen of these cases during the last few weeks, all of whom were operated over a year ago, and the results, subjective and objective, have been very satisfactory.

The operation most frequently used in these cases was high vaginal fixation in addition to the perineal repair. In five cases I made the typical Wertheim-Schauta operation—the interposition of the uterus between bladder and vagina. These cases have only been under observation a short time. The immediate result regarding the position of the uterus was very good, and this operation would apply to all cases of complete prolapse in women after menopause. The age, though, is not of great importance, as it will be indicated to prevent future pregnancies on account of danger and possible recurrence of prolapse. In such cases, ligatures and division of the tubes, or preferably excision of the uterine end of the tube, is to be done prior to the interposition of the uterus.

The technic which I employed is the same as recently described by Broese. A long incision is made through the anterior vaginal wall from urethra to one-half inch above cervical opening, and a small transverse incision at the cervical end of the long incision. This small transverse incision I always make, as the field of operation is better exposed and the loosening of the bladder made easier and safer. The anterior wall is separated from the bladder and partially resected, if necessary. Now follows the difficult part of the operation—the loosening of the bladder from the cervix and uterus. During this part of the operation there is at times a good deal of bleeding, and it is of great importance that all bleeding should be stopped before the vesico-uterine peritoneum is opened.

After opening the vesico-uterine peritoneum the body of the uterus is drawn down by uterine forceps. At the same time the cervical portion is pushed towards the posterior cul-de-sac, which facilitates the pulling forward of the body of the uterus. Two sutures (Broese recommends three or four) of moderate size catgut are passed through body of uterus and vaginal flaps. These sutures are not tied until vaginal wall and the transverse incision is closed. The suture of the peritoneum and the posterior wall of the uterus is hardly essential. Latzko could demonstrate by pathological specimens that the peritoneum heals in good position without sutures.

In some cases, if there is still slight bleeding, a small gauze drain is advisable.

One condition requires special mention. Is it advisable to make an amputation of the cervix in case of pathological changes of the cervix, such as enlargement, elongation, erosion? Experience shows that it is preferable not to make an amputation except in very great enlargement, and, as a rule, to make only small excision, as, for instance, the so-called Schroeder excision. This operation is to be followed by an extensive repair of the perineum. It is of importance to suture the deep muscular structures of the perineum, which are known as levator muscles.

Regarding the suture of the levator, it is not considered necessary to free the levator muscles from the intercellular tissue. Broese mentions that thorough dissecting is not altogether without danger, as larger veins are easily opened and may give rise to thrombosis; it is sufficient to locate the muscles by touch of the finger, and suture by deep-buried stitches.

Nose Bleed*

By ARTHUR I. WEIL, M. D., New Orleans.

Epistaxis is a phenomenon which all of us have had occasion to see from time to time, and have been called upon to treat. It varies in severity from a few drops, merely enough to stain the handkerchief, to a regular gush of blood sufficiently severe to cause exsanguination, and even loss of life, if not promptly checked. It occurs at all ages and in all classes, from the robust, plethoric, rum-soaked individual on the verge of apoplexy, in whom indeed it may act as nature's safety valve, a natural means of depletion, diminution of cerebral congestion and so avert an impending apoplectic attack, to the most miserable, emaciated, anemic, run-down woman in whom every drop of blood counts, and who can ill afford the added drain of epistaxis. It may occur in one single attack, most alarming in severity, once checked never to return, but more frequently it is a repeated occurrence, recurring at more or less frequent intervals, and while each attack is so slight as to cause no immediate concern, nevertheless, apart from the embarrassment and annoyance occasioned by the frequent nose bleed, the cumulative loss of blood is a constant drain on the patient's vitality, giving rise in the end to a noticeable anemia.

It should be borne in mind that epistaxis is not a disease, but a symptom. While it is commonly a manifestation of some purely local change in the nose, it is, on the other hand, not infrequently a symptom of some constitutional or visceral disease in a remote part of the body. A more intelligent insight into the etiology may be obtained from prefacing it with a brief review of the blood supply of the nose.

The middle meningeal artery gives off the sphenopalatine branch, which, when it reaches the posterior portion of the lateral wall of the nose, subdivides into the lateral posterior nasal arteries. These are distributed over the middle and inferior turbinals and the middle inferior meati. The superior turbinals and the anterior portion of the outer wall of the nasal chambers are supplied by the posterior ethmoidal and anterior ethmoidal arteries, respectively.

The septum is supplied by the arteries nasales posteriores septi, a branch of the sphenopalatine, through the sphenopalatine foramen. It has three main branches: one supplies the posterior, an-

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other the inferior, and another the middle and posterior portions of the septum.

The anterior ethmoidal and posterior ethmoidal arteries are distributed to the anterior and superior portions of the septum. (Ballenger.)

The large arteries of the septum, therefore, are seen to be well posterior, largely out of the sphere of danger from accident or those corroding influences likely to cause periodic hemorrhage from the anterior portion of the septum. The supply of the inferior and middle turbinals and meati is very rich, and, since the turbinated bodies themselves consist largely of erectile tissue, and in the performance of their physiological functions are subject to frequent engorgement, one would naturally suppose them to be a common source of severe hemorrhage. On the contrary, they are, fortunately, seldom found to be the seat of the trouble. On the anterior surface of the septum, just inside the vestibula nasi, there is a plexus of small arteries which sometimes attain considerable size. This area, sometimes called Keisselbach's spot, is the one most prone to give rise to hemorrhage, from one cause or another. This is the suspicious spot, the one first subjected to scrutiny, and in a majority of cases a careful inspection of this area will reveal the cause of the trouble.

The cause of the nose bleed may be local or general, or a combination of the two. The most common local cause, of course, is traumatism, or injury of some kind. Naturally, a severe blow on the nose, even without breaking the bone or the cartilage of the septum, may bend it suddenly, and though the resiliency of the cartilage will cause it to spring, uninjured, back into place, a blood vessel in the mucous membrane may be torn and give rise to bleeding. But a more common source of injury, less apparent and never reported by the patient, unless he is questioned, is the habit of picking the nose. Little crusts or scabs in Keisselbach's spot cause local irritation and itching, the finger is introduced, and as the scab or crust is torn away it leaves a bleeding spot. This point on the septum is very prone to excoriation, and superficial ulcer, with the result that the slightest rough handling or even violent blowing of the nose, may start the blood. Though the hemorrhage from this source is usually of the small recurring type, still I have seen very profuse hemorrhages resulting in this

way. At this point, also, the arteries may be materially larger than usual, or the veins may be varicosed, either condition predisposing towards bleeding. These enlarged arteries may not be easily made out through the congested mucous membrane, but an application of adrenalin for a few moments will cause an ischemia of the membrane, and a plexus of enlarged vessels is then easily discerned.

Though the commonest seat of the trouble, Keisselbach's spot is by no means, however, the only area where hemorrhage occurs. Among the traumatic causes of nose bleed must not be forgotten surgical procedures in the nose. Intra-nasal surgery is a frequent source of severe hemorrhages. In fact, the most serious of all are probably due to this cause, but they need not be detailed further, since surgical measures in the nose would hardly be understood by anyone who did not feel competent to cope with the succeeding hemorrhage.

Anything which causes nasal congestion predisposes towards epistaxis. Thus, it is not an infrequent concomitant of coryza, a grippe or streptococcus rhinitis, or chemical or mechanical irritants to the nose. The presence of large adenoids in children predisposes towards nasal congestion and a tendency to nose bleed. In these cases, removal of the adenoids puts an end to the trouble.

Akin to these congestive nose bleeds, but due to distinct causative agency, are those nose bleeds which accompany nasal diphtheria. They are of two classes: that which occurs in "black" or hemorrhagic diphtheria, fortunately rare, with usually profuse hemorrhage accompanied by pronounced sepsis and prostration; and that much more common and more important class which is to be found in the ordinary case of nasal diphtheria. As is well known, nasal diphtheria, as a rule, is very mild in character, giving rise, where the process is confined in the nose to the exclusion of the nasopharynx and throat, to almost no general symptoms, slight fever and little or no indication of sepsis. These are the so-called walking cases of diphtheria, of little moment to the patient himself, since the symptoms are so slight, but of great importance to the family and to the community, since the infection is readily passed on to others, in whom the disease may take a much more virulent course. It is such cases that ride in street cars and attend the schools, communicating the infection to scores of others, innocently, as a rule, since the patient or the parents, and also

sometimes the attending physician, is unaware of the nature of the trouble. The commonest and most constant symptom in this class of diphtheria patient is a bloody, purulent nasal discharge, often unilateral. So important is this symptom of bloody discharge that it should be an iron-clad rule—and I make it so in my practice—that any child with such a discharge should be isolated as a case of diphtheria until a culture has proven it to be negative. A streptococcus infection in the nose may give rise to much the same symptoms, except that the manifestations are more acute and the hemorrhage, as a rule, more profuse.

A foreign body in the nose may give rise to nose bleed, fresh and unmixed blood at first, due to injury to the soft parts at the time of introduction, later a sanguino-purulent discharge, after the body has remained for some time. This discharge is always unilateral.

The various nasal catarrhs, but more especially chronic atrophic rhinitis and ozena, where there are many dry crusts and scales in the nose, are very apt to cause bleeding when the scabs loosen or are blown out.

Other local causes of nose bleed are numerous, but the occurrence of epistaxis from all these combined are rare in comparison to those due to the above-mentioned agencies. A perforation of the septum, when the vessels have been broken down and the edges are covered with granulations, gives rise to bleeding from slight cause. Bleeding polyps in the septum, though uncommon, are a well-recognized cause, and the hemorrhage from them may be severe and difficult to check. Sarcoma and other growths in the nose, as well as syphilis and tuberculosis, may all result in nose bleed, slight or severe, according to their situation and the size of vessels that are eroded.

The systemic causes of nose bleed may be classified under three heads: (1) The blood dyscrasias, e. g. hemophilia, purpura, etc.; (2) acute febrile diseases; (3) diseases which cause increased blood pressure.

(1) The severest nose bleeds under this head are those caused by hemophilia. This disease is, fortunately, rare, for hemorrhage from the nose from this cause, as indeed any hemorrhage anywhere in the body, is exceedingly difficult and sometimes impossible to check. Death has been known not infrequently to follow these

bleedings. Other blood dyscrasias which give rise to nose bleed are purpura, scorbutus, chloremia, leukemia and others. In all of these diseases the nose, by virtue of its mucous lining, is subject to hemorrhage or ecchymosis, just as mucous surfaces anywhere in the body. The treatment, of course, should be directed toward the cure or amelioration of the general, and not the local condition.

(2) Almost any of the acute febrile diseases may be ushered in by an attack of nose bleed. The text-books mention it as a prodromal symptom in many of them, notably typhoid fever, where it has been classed along with rose spots, diarrhea and enlarged spleen, as among the cardinal symptoms. In other diseases, as in pneumonia and the acute exanthemata, it is not uncommon. It is most frequently present in these diseases, accompanied by nasal congestion, chief among which may be mentioned influenza, measles and scarlet fever. In all of these affections the nose bleed is merely an incident in the general disease, a symptom which is, as a rule, evanescent, and requires no treatment.

(3) Among those systemic conditions which cause increased blood pressure, and consequent epistaxis, the most important are cardiac affections, usually valvular; kidney disease, especially chronic interstitial nephritis, cirrhosis of the liver or other conditions obstructing the portal circulation, arteriosclerosis, aneurisms or tumors pressing upon the large veins of the neck. In all of these conditions, local treatment is naturally of no avail, and our effort should be, as far as possible, to remove the cause.

The local and systemic causes of nose bleed may sometimes work in combination to produce their effect. Thus, in the nose, large, superficial or somewhat eroded arteries, which possibly would not bleed of themselves, may be brought to bleed by an increased blood pressure, be this increase temporary or permanent. Thus, the higher pressure brought on by violent physical exercise may cause hemorrhage, where local change alone would not have been sufficient to bring about such a result.

The most notable example of this combined action is found in the cases of so-called vicarious menstruation. Though, to be sure, there is, in the true sense of the word, no such thing as vicarious nasal menstruation; nevertheless it is a well-established fact that women in whom the menses have suddenly ceased, either on account of the menopause or some other cause, do have periodical

nose bleed, every twenty-eight or thirty days, corresponding to their menstrual period. This is explained by the fact that the increased blood pressure which always accompanies a suppressed menstruation reacts upon a congested or eroded nasal mucous membrane, producing epistaxis. Some women in whom menstruation is normal have periodic nose bleed, commencing a few days before menstruation and ceasing with the onset of the normal function, a fact explained by the physiological, increased, blood pressure of the pre-menstrual period.

These various constitutional and systemic origins of nose bleed must always be borne in mind. An epistaxis, the cause of which is not easily to be found in the nose, or even those where the bleeding point is found, but where the bleeding recurs again and again, in spite of treatment, should always make one suspicious that there is some remote cause of the trouble, and should be the occasion of careful urine and heart examinations, investigation of the blood pressure and other possible sources.

Nose bleed occurs oftenest in robust, full-blooded males, especially those subject to violent physical exertions. It is common amongst men working in chemical works or factories where there is much dust or small particles in the air, which set up chemical or mechanical irritation and nasal congestion. It is not uncommon in women, and especially apt to occur during the period of gestation. In children it is less apt to occur, and, when it does, it is usually due to adenoids or to the habit of picking the nose, which is common in children.

The diagnosis of epistaxis is naturally very simple, though, anomalous as it sounds, all nose bleeds are not due to epistaxis, nor does epistaxis always give rise to nose bleed. The blood, although it makes its appearance in the nose, may come from the naso-pharynx or throat, but a cursory examination of the throat and naso-pharynx will reveal this fact. On the other hand, bleeding may take place far back in the nose, and the blood, instead of coming forward, may drop into the throat, to be expectorated, or it may be swallowed and later vomited. In this manner a simple epistaxis may be mistaken for hemoptysis or hematemesis. Such mistakes are not common, but, since they have been known to occur, they are worth a passing mention.

The treatment of epistaxis is both simple and rational. The

first necessity is to find the bleeding point; the second, to stop the bleeding. It often happens, however, that the general practitioner has not at hand a forehead reflector and nasal speculum for properly inspecting the nose. In this event, general measures may be adopted until such time as the nose can be satisfactorily examined. The simplest procedure, when the blood seems to come from the anterior part of the nose, consists in compressing the nose between the fingers, so exerting pressure on the vessels of the septum as to allow thrombosis to occur. Ice compresses or an ice bladder to the outside of the nose are sometimes effective. Ice water or very hot water, as hot as the patient can bear, may be snuffed up the nose, or a weak solution of adrenalin may be sprayed into the nose. If the patient feels faint, let him lie flat, but it is not well to use stimulants, since they tend to increase the blood pressure, which nature, by this very faintness, is endeavoring to diminish. All blood clots must be removed from the nose and the nose must be kept clear of them. Leaving blood clots in the nose with the idea that they may exert pressure, and so finally check the hemorrhage, is based on an erroneous conception. They merely cover the bleeding points, tend to prevent capillary and vesicular thrombosis and to keep any astringent or other application from reaching the bleeding spot. Various astringents, as gallic or tannic acid, silver nitrate, perchloride of iron, may be used, but it is not well to use them blindly in the nose unless they can be applied directly to the bleeding point.

Any of these measures may prove effective, in that the hemorrhage is at least temporarily checked. It is well, however, always at leisure, to examine the nose carefully to ascertain the spot at fault, and, by proper treatment, prevent recurrence. With good illumination and a head mirror, the septum is carefully searched, especially in the region of Keisselbach's spot, and if nothing is found there the turbinates and lateral wall are thoroughly inspected. A preliminary shrinking of the tissues with cocain and adrenalin solution often greatly facilitates such an examination. If the bleeding point can be found, it can be permanently checked by the use of the cautery. I usually use one of the mild cauterizing agents, my favorite being trichloracetic acid crystals. If this is not sufficient, the galvano-cautery is always effective in obliterating the vessels at fault. A rather small cautery needle should be used, with a flat

point and at a dull red heat. The operation is perfectly painless under cocain. The most alarming hemorrhages from spurting arteries in the nose can be checked by this means, providing, always, that you can make out the exact point of the bleeding.

Sometimes the examination reveals a small ulcer or erosion on the anterior portion of the septum, either on one or both sides. An area of this kind is always a source of repeated hemorrhage. Such lesions cannot be cured with the cautery, but the application of astringent or soothing salves serves a double purpose, not only promoting healing of the parts, but checking the tendency to pick the nose, which may be almost irresistible on account of the constant itching and irritation of the dry scabs. My favorite salves for this purpose are a two per cent gallic or tannic acid salve or two per cent white precipitate ointment. Simple white vaselin may serve as well.

Occasionally, though fortunately of rare occurrence, the hemorrhage may be so severe, the blood gushing from the nose in a great stream, that there is no time, nor indeed a possibility, of making out the bleeding point. In these cases, of course, the only remedy at our disposal is to tampon or pack the nose. Strips of sterile gauze, about an inch in width, plain or powdered with bismuth, are best for the purpose. The gauze should be carried well back into the nose by means of a large blunt probe or forceps and the back part tightly plugged so as to give a foundation upon which the anterior pack can be built up. In this way the use of the post-nasal tampon may be avoided. The nasal pack must be uniform and firm if it is to accomplish its purpose. Several special forms of nasal packs have been devised for this purpose, but we usually make out very well with the simple gauze strip properly manipulated. It should be remembered that the use of the nasal pack is a last resort, to be avoided whenever possible, and especially is this true of the post-nasal tampon. It is dangerous, on account of absorption of septic material. Its use is often followed by high temperatures, also of infections of the ears. I have seen several cases of acute otitis and two of mastoiditis following the use of the nasal pack and post-nasal tampon.

Louisiana State Medical Society Proceedings.

EDITED BY PUBLICATION COMMITTEE,
DR. JOSEPH D. MARTIN, Chairman, 141 Elk Place, New Orleans, La.

DR. J. E. KNIGHTON, of Shreveport, read a paper entitled

The Relation of Gall-Bladder Diseases to Disturbances of Digestion.

I am prompted to write this paper by the conviction that we have often failed to place the responsibility for digestive disturbances where it properly belongs.

That gallstones frequently cause digestive disturbances without ever producing the more characteristic symptoms has been demonstrated over and over again, and that these patients are passing through the hands of the profession without being recognized as such is amply proven by the autopsy findings from the various hospitals of this and other countries. As an example, we will notice briefly the report from the Philadelphia General Hospital, published recently by John A. McGlinn. In a long series of autopsies, 506 cases of gallstones were found, representing about six per cent. of the total number of autopsies, and out of this entire number, 506, only 21 were diagnosed before death. When we take into consideration the fact that, out of 506 cases of gallstones, only 21 cases were diagnosed, it seems to me that we are forced to the conclusion that only a small percentage of the cases present the typical and characteristic paroxysms of hepatic colic, jaundice, etc.

In discussing the relations of gall-bladder disease to digestive disturbances, it is interesting to notice in this series of autopsies the associated lesions of the gastro-intestinal tract. It is pointed out by the author that, in the 506 cases of gallstones, there were 183 associated lesions of the stomach and intestines, not to mention 66 cases in which there existed lesions of the pancreas. While we cannot safely charge the condition of the gall-bladder with the responsibility for the existence of all those gastro-intestinal lesions, it is certainly true that a large percentage of them may have resulted directly from that cause; and, on the other hand, the relation must have been reversed in a number of cases, the gall-bladder infection resulting from intestinal lesions. Dr. W. G.

Walcot, of Dallas, Texas, reported a series of cases of gallstones in whom he had made analyses of stomach contents. These analyses, with few exceptions, showed hyperacidity, with the usual accompanying symptoms. My own observations in a number of cases have been in keeping with results reported by Dr. Walcot.

In view of the fact that there are so many gastro-intestinal lesions associated with gallstones, and that in many cases where no definite lesion exists there is a disturbance of gastric secretion, it is obvious that a greater percentage of diagnoses should be made than was reported in the series from the Philadelphia General Hospital. It is my impression that many a failure to make a diagnosis of this condition is due to the fact that a careful history of the patient's illness is not taken and studied as it should be. Dr. Graham, who is associated with the Mayo brothers on the staff of St. Mary's Hospital, calls attention to certain symptoms which, though often treated indifferently by both patient and physician, are just as characteristic of gall-bladder disease as the more typical paroxysms. I take the following quotation from Dr. Graham's paper published in 1909:

"In gall-bladder disturbances there are, first, those cases of mild disturbances, usually gastric and often lightly considered by the patient, and even more lightly by the physician. These are light attacks of distress, gas, upward pressure, coming soon after food or at irregular times, often of sudden onset, short duration, eased by belching, or perhaps slight vomiting, regurgitation or slipping away almost unnoticed and without treatment, though many and various measures may get credit for natural return to health. These sudden, irregular, mild, dyspeptic attacks are quite as typical of gall-bladder disturbances as are the severe typical attacks which, as a rule, supplant the mild.

"Second. There is another set of cases, with more or less prolonged, dull, mild or quite severe pain in the epigastric area, right arch, or whole liver area. This pain may be increased by food, exertion, or motion. Deep respiration gives pain, and when entirely located posteriorly the trouble may be called pleurisy. These patients pass through prolonged, steady attacks, then ease may alternate with distress and comparative excellent health be enjoyed for a time. During an attack, dyspeptic symptoms are prone to be present, and but for this irregularity, as compared to ulcer, one might often consider gastric lesions."

Dr. Graham then describes the most violent paroxysms of hepatic colic, which hardly any physician would fail to recognize and which is not necessary to consider in the present discussion. The point that needs to be emphasized is that many of the cases that come to us consult us for what the patient looks upon as a trivial attack of indigestion, in reality are cases of gall-bladder disease, and if we take the time and trouble to secure complete histories

we will find that these attacks have been recurring at irregular intervals for a period of months or perhaps years, with comparatively good health during the interval, and the other features that go to make up the clinical picture described by Dr. Graham.

With such a history before us we should at once think of the gall-bladder as being the probable source of the trouble, and a careful physical examination of the patient should settle the question. In view of the fact that a large percentage of the cases of pancreatitis are associated with gall-bladder disease, and no doubt result from the gall-bladder infection, we must also consider the disturbances of digestion coming from this source. In a paper published in a recent number of the *Journal of the A. M. A.*, Deaver makes the statement that, of the seventy-three cases of chronic pancreatitis that have come under his observation, in thirty-three there were stones in some portion of the biliary passage, and in thirty-eight there were no stones at the time of operation. Twelve of the non-calculus cases, however, had demonstrable changes in the gall-bladder at the time of operation, making a total of forty-seven out of the seventy-three cases that were associated with gall-bladder disease. These figures certainly indicate that a considerable majority of the cases of pancreatitis are secondary to gall-bladder disease. When we keep in mind that the pancreas is one of the most important organs, if not the most important organ, of digestion, indeed so important that, under certain conditions, for example, in achylia gastrica or after gastrectomy, this organ compensates in a very satisfactory manner for the lost secretory function of the stomach, we may realize the serious nature of the digestive disturbances that result from those cases of gall-bladder disease in which the pancreas becomes involved. As to the treatment of those conditions, I wish to state I am sure that we, as internists, have too frequently failed to recognize the fact that a large majority of these cases only get temporary relief from non-surgical treatment. It seems to me that no one could read the literature on this subject published during the past two or three years by such men as the Mayos, Graham, Deaver, Moynihan and others without being impressed with the truth of the above statement.

Of course, every one recognizes the fact that some of the milder cases may be cured by non-surgical measures, and even in the more

severe types William Mayo has said: "That temporary palliation can be procured by non-operative measures cannot be denied, but the cure of the patient can only be brought about by surgical measures."

DR. F. E. LAMOTHE, of New Orleans, read a paper entitled

Diagnosis of Abnormal Stomach Evacuation.

There are many cases we see which, while the chemical analyses are abnormal, do not suffer, while many, whose analyses are normal, yet complain of a multitude of gastric symptoms. This is one of the great factors which has led the chemical analysis of the gastric contents into disrepute and has kept gastro-enterology in the domain of empiricism. Instead of doubting the value of the chemism, we should search for more light. Our European brethren did, and to Sahli, Mathieu, Remond, Roux, Laboulais and Gouiffon and others belongs the honor of having found the light and opened the door to those who were knocking from without.

We have long ago suspected those who have abnormal stomach secretions, and who do not suffer, to have established a compensation by being able to digest in the intestines what escapes stomach digestion. We have often asked why it is that some are so fortunate and others not? Also, why is it that, some having normal stomach secretions, suffer tortures? The same answer can be given to both questions: It depends upon the rapidity of stomach evacuation.

So far, we have wandered in the dark, and could only appreciate evacuatory abnormalities after they had reached such a degree that the diagnosis was forced upon us. Great dilatations are diagnosed by insufflation, and lately more exactly by means of the X-ray, which method I cannot recommend too highly. Clappotage is also a symptom which is of much service, but it is impossible to tell by it the quantity and quality of liquid in the stomach.

Then we began to have indigestible substances, such as prunes, with the evening meal, and hunted for remnants of their skins on washing the stomach next morning. By numerous washings and after many days of experimentation we finally arrived at the conclusion that prune skins were evacuated after a certain number of hours.

The potassium iodide and salve tests have also been practically abandoned as impractical and unreliable.

The first step taken in advance was when Mathieu and Hallot introduced 20 c. c. of a finely emulsified oil into the Ewald test-breakfast. After one hour the stomach was evacuated and then washed with 200 c. c. of water, and from the quantity of fats in both liquids he hoped to be able to calculate how much the stomach contained at the end of the hour, how much secretion was in the stomach, and also how much of the test breakfast was evacuated. But, unfortunately, the emulsion did not always hold, and both evacuation and secretion were retarded by the fats. Sahli modified this method by using butter in a well-cooked bouillon of flour, but this was open to the same objections as the Mathieu method, and is practically abandoned.

It was found that a substance was necessary which was very soluble, would mix well with the gastric contents, would not be absorbed, would not influence digestion, and was not contained in the gastric secretion, and disodic phosphate was found to be the best. The exhaustive experiments of Roux and Laboulais showed that this salt was found only in traces in the gastric juice and was absorbed only to the extent of two per cent. or less by the gastric mucosa, when in 1 or 2 per thousand solution. The difference this makes in the final results is very slight. At the same time no effect was found upon the chemical constituents nor quantity of secretion.

The test is carried out in this manner: A test breakfast of 60 grams of stale bread and 400 c. c. of a solution of disodic phosphate ($\text{Na}_2 \text{H P O}_3$), 1 to 1,000 (distilled water being used) is given. At the end of an hour we have as much of the stomach contents as possible, and wash the stomach with 200 c. c. of a 1 to 1,000 sulphate solution.

It is necessary to introduce and withdraw the sodium sulphate solution only three or four times in order to obtain a thorough mixture of it and what stomach contents we have left after the first extraction. Having obtained as much of the liquid of lavage as possible, we titrate the specimen first obtained, or the test breakfast, plus the secretions in the stomach, for phosphates. Then we titrate the liquid of lavage for sulphates. This is all that there is to the chemical technic. The rest is only a simple algebraic

problem, and, if the last equation is remembered, this can be eliminated.

To find total contents at end of one hour:

Let x = quantity that remains in stomach after first evacuation.

n = quantity of sulphate in 1 c. c. of liquid used in lavage.

n' = quantity of sulphate in 1 c. c. of what is obtained by lavage, or mixture of $x + v$.

v = quantity of liquid used in lavage.

We now form the following equation:

$$vn = (v + x) n'$$

This is simplified thus:

$$\begin{aligned} vn &= xn' + vn'. \\ -xn' &= vn + vn'. \\ xn' &= vn - vn'. \\ xn' &= v(n - n'). \\ x &= \frac{(n - n')v}{n'} \end{aligned}$$

We know that $v = 200$ c. c.; $n = 1$ milligram of sulphate, and by titration we find n to be .76. We substitute these numerals in the latter part of the equation.

Then:

$$\begin{aligned} x &= \frac{v(n - n')}{n'} \\ x &= \frac{200(1 - .76)}{.76} \\ x &= \frac{200 \times .24}{.76} \\ x &= 63 \text{ c. c.} \end{aligned}$$

Now, as there remains in the stomach 63 c. c. after extraction, and we have extracted 125 c. c., the total stomach contents at the

end of one hour will be $63+125$, or 188 c. c. The next problem is to find how much of this is secretion and how much remains of test breakfast.

The solution of phosphate in the test breakfast was 1:1000, or 1 milligram per c. c. Now, if titration shows liquid extracted to contain .45 milligrams per c. c., and there was 188 c. c. in the stomach, there must have been $.45 \times 188$, or 89 milligrams.

As each milligram represents 1 c. c. of test breakfast, there must be 89 c. c. of test breakfast left in the stomach. The difference between the total gastric contents and the amount of test breakfast remaining is the amount of secretions plus liquefied solids of test breakfast, or 99 c. c.

In some recent experiments I have found a method by which I can calculate the amount of liquefied solids. This will be ready for publication in a few days.

Now, as there were 400 c. c. of test breakfast, and there remain 89 c. c., the other 311 must have been evacuated.

The results reviewed would be thus:

Total contents of stomach at end of one hour.....	188 c. c.
Total contents left in stomach after evacuation by tube....	63 c. c.
Total amount of test breakfast	400 c. c.
Total amount of test breakfast left in stomach after one hour	89 c. c.
Total amount of liquids, gastric juice, etc., after one hour..	99 c. c.
Total amount test meal evacuated in one hour.....	311 c. c.

Now, in order to get some idea of the relationship of evacuated to non-evacuated test breakfast, we divide the evacuated by non-evacuated, or, in other words, find how many times more evacuated meal there is than non-evacuated.

$$\frac{E}{N E} = \frac{311}{89} = 3.49$$

The same is done with the secretion, which is compared to the test breakfast remaining in the stomach, but, as the number here obtained is abnormally low, we multiply secretion by 100 for more latitude.

$$\frac{S}{N E} = \frac{99 \times 100}{89} = 111$$

The average co-efficient of evacuation being 2.5 to 3.5, while that of secretion is 60 to 70.

CASE I. Euchlorhydria, hypoevacuation, eusecretion. A. Z., suffering last seven or eight years. Belches great deal and has taste of food for several hours after meals; has had sour, and, at times, bitter regurgitations after meals. Principal complaint is heaviness in stomach region and headaches after meals. At times he has had severe, cramp like pains in "pit of the stomach." Bowels irregular; has lost ten pounds in four months.

Physical Examination: Stiller type; right shoulder higher and broader than left; dullness, rales, increased fremitus and voice-sounds over right apex. Heart negative; abdomen negative; hydrocele on right side. Reflexes normal; blood pressure, 125.

Stomach Contents: 29 T. A. 40. Chymification fair. Mucus slight. Blood none.

$$\begin{array}{rcl}
 \text{Contents or } C=316 & S & \frac{116 \times 100}{200} = 58 \\
 \text{Secretion or } S=116 & N E & \\
 \text{Non-evacuated or } N E=200 & E & \frac{200}{200} = 1 \\
 & N E & \\
 \text{Evacuated or } E=200 & &
 \end{array}$$

CASE II. Euchlorhydria, hyperevacuation, eusecretion. J. B., age 29. Pains in lower abdomen for past two months. Stools soft, offensive, dark in color. Large quantities of offensive gases per rectum. Fetid breath, coated tongue, and bad taste in morning. Large meat eater and excessive smoker.

Physical Examination: Muddy complexion; slightly anemic; heart rate, standing 69; sitting, 118. Abdomen tympanitic, but not much distended; sigmoid filled with soft mass; cecum gives clappottage. Reflexes normal.

Stomach contents: HCl, 32; T. A., 42; mucus, slight; blood, none; chymification, good.

$$\begin{array}{rcl}
 C = 97.5 & E = 240 & \frac{S}{N E} = 62.5 \\
 S = 37.5 & N E = 60 & \frac{E}{N E} = 4
 \end{array}$$

Feces: Soft, dark, small quantity; putrid odor; alkaline. Hydrobilirubin present; small amount of gas generated on fermentation test of Schmidt and Strasburger. Slight amount of mucus; no blood; macroscopic meat remains; very little vegetable debris; many undigested muscle fibers. Bacteria abundant.

Urine, Sp. Gro. 1026; color, dark brown; odor, strongly aromatic; reaction acid; mucus, bacteria, leucocytes, indican plentiful.

CASE III. Hyperacidity, hyperevacuation, hypersecretion. M. M., 40 years. Last year and a half has had burning in the epigastrium five or ten minutes after meals, with acid regurgitations followed by pyrosis. Drinks and food calm pain for a while; is now in habit of drinking glass of milk with tablespoonful of lime water every hour. Takes vichy and soda to calm pain. Has taken diapepsin and other dyspepsia tablets. Constipated.

Physical Examination: Pain over entire abdomen, especially at a point midway between the umbilicus and ensiform cartilage and a little to the right. Fecal masses in ascending transverse and descending colons. Sigmoid contains hard, round masses, which make it feel like a string of beads.

Liver dullness, 15 cms, and lower border, 4 cms below costal arch in mammary line.

HCL., 45; T. A. 56; blood, none; mucus, none; chymification good.

$$\begin{array}{rcl} C = 143 & S = 68 & S \\ & & \hline & & NE = 90.6 \\ E = 315 & NE = 75 & S \\ & & \hline & & NE = 4.2 \end{array}$$

Feces: Hard, round masses, almost odorless; digestion good. Little vegetable remains. No excessive fermentation or putrefaction. Hydrobilirubin present. Reaction slightly alkaline.

CASE IV. Hyperacidity, hyperevacuation, hypersecretion. A. R., suffering for years. Has had a gastro-enterostomy performed two years ago and suffered shocks during operation, which has frightened him very much. After counselling operation, which was refused, his physician sent him to me. Suffers almost continually; only relief he gets is after using stomach tube or vomiting, and then taking alkalines mixed with atropin and codein. At times has had morphin by needle, pain was so great. Constipated.

Physical Examination: Tall, emaciated, patient "grinding teeth and pressing abdomen with both hands." Patient shows signs of great physical pain. Abdomen painful, especially over lower left ribs and stomach region. Muscles of abdomen tense. Cecum contracted; contains fecal matter. Sigmoid about size of a thick pencil and is empty. X-ray shows no signs of gastro-enterostomy. Pylorus functioning, but bolus passing is small, and with great effort on part of stomach.

Stomach contents: HCL, 40; T. A., 50; blood pressure, 116; mucus, none; chymification poor. Fecal examination not made.

$$\begin{array}{rcl} C = 495 & E = 120 & S \\ & & \hline & & NE = \frac{215 \times 100}{280} = 76.6 \\ S = 215 & NE = 280 & E \\ & & \hline & & NE = \frac{120}{280} = .67 \end{array}$$

CASE V. Hyperacidity, hyperevacuation, hypersecretion. N. L. Has suffered from indigestion last fifteen years. Sent to city for a diagnosis and line of treatment to be followed at home under his family physician's care. Complaints of feeling of weight and vague pains in epigast after eating. Vomits food, indigested and fetid, which was eaten ten or twelve hours before. Has not been able to eat bread or to smoke for some time past. Relishes meat. Feels weaker every day, and is growing thinner. Has lost thirty-four pounds in last five months.

Physical Examination: Small in stature; cachexia; emaciated. Abdominal walls very thin and non-rigid. Small mass size of a pigeon's egg, movable with respiration, felt on left in mammary line, while on right side, and only on deep inspiration. Clappotage one inch below navel. Cecum contains fluid and contracts under the fingers. Sigmoid contains small amount of soft fecal matter.

Stomach contents: HCl., 2; T. A., 20; lactic, 0; Boas Oppler B.; sarcina mucus, 0; hymification excellent.

Feces: Dark, soft; digestion good; odor putrid. Blood present and reaction alkaline; hydrobilirubin.

$$\begin{array}{rcl} C = 405 & E = 92 & \frac{S}{N E} = \frac{97 \times 100}{308} = 31.4 \\ S = 97 & N E = 308 & \frac{E}{N E} = \frac{92}{308} = 29 \end{array}$$

CASE VI. Hyperacidity, hyperevacuation, hypersecretion. S. A., age 32. Suffering last ten years of stomach. Began with burning in epigastrium, acid regurgitations, and later vomiting of very acid material. Was treated for ulcer for two years and improved, but has never been well. Was advised to travel, as she was melancholic. In Paris she consulted a physician, who told her sister that she had cancer. Being winter, she took the southern route home and came to New Orleans. While in that city she came with a letter of introduction from her French physician, in which he said he had diagnosed a malignant condition. She complained of vomiting fetid food and of noises and pains in the stomach. Has lost a great deal of weight, but does not think she has lost much lately; is feeble and nervous. Constipated.

Physical Examination: Very much emaciated and very anemic. Hemoglobin, 60; clappotage two inches below umbilicus; gurgling over stomach region during respiration. Large intestines palpable over almost entire course. Right kidney can be grasped in hand; left palpation about half.

Stomach contents: T. A., 10; Cl., 0; lactic acid, 0; chymification good; no sarcinae; no Boas Oppler B.; blood present; mucus plentiful.

$$\begin{array}{rcl} C = 103 & E = 324 & \frac{E}{N E} = \frac{324}{75} = 4.5 \\ E = 324 & N E = 75 & \\ N E = 75 & S = 28 & \frac{S}{N E} = \frac{28 \times 100}{75} = 37 \\ S = 28 & & \end{array}$$

One of the peculiarities was that when I washed with the 200 c. c. of sulphate solution, I was not able to get back more than 50 c. c., and that after this there was still clappotage, so that I made a diagnosis of hour-glass stomach. This patient returned to New York, was operated upon and an old ulcer scar was found which constricted the stomach, producing an hour-glass contraction, and part of the cicatrix had undergone a cancerous change, showing that all three were right.

A resume of the results of over a hundred cases examined by this method shows that: Ulcer presents hyperchlorhydria, hyperevac, hypersec; Cancer, hypochlorhydria, hypoevac, hyposec; Nervous gastritis presents all kinds of variations; principally euchlorhydria, hypoevac, hypersec.

I have not carried on this work long enough to publish an opinion of the other forms of gastritis.

DR. E. L. MCGEEHEE, of New Orleans, read a paper entitled

Influence of Southern Louisiana Climate on Pulmonary Tuberculosis.

The principal factors that determine climate are temperature, light, humidity, air movements, air density, water and soil. The actual climate depends on various combinations of these factors. Huggard's classification of climate is logical, according to demands made upon the living body for the production of heat, for the rate of heat production is the surest measure of activity of vital metabolism. As has been said by Dr. Sewell, that medical climatology is not only definite physiological reactions to certain meteorologic conditions, but also the empiric biological results of geographic distribution.

In selecting a climate there is a personal equation to consider in order to find that best suited to a definite case, and not to choose a stimulating climate for one unable to respond to the demands for physiological reaction.

Temperature and humidity are the main meteorologic factors that determine reaction conditions. It is true that pathological germs require some heat and moisture for development, hence dry air would seem best for tubercular patients. On the other hand, dry air is nearly diathermanous, and, so, freely permeated by sun heat; were it not for the moisture in the air this earth would not be inhabitable. For example, note the high temperature records and heat prostrations in more Northern latitudes, where air is more rare and dry than in Louisiana.

Gentle wind, five to ten miles per hour, seems to have the greatest hygienic value, such as along the seaboard of Louisiana. Moist, cold air increases most the heat loss and increases the metabolism beyond the capacity for reaction in physiological function. This range is narrowed greatly by disease.

The climate in the pine lands of Louisiana calls out the greatest physiological efficiency without the excessive expense of energy to meet the physical conditions in the various seasons.

This climate is especially suited for heart and kidney troubles; the aim is to seek that environment where the physical condition will throw the least possible strain on the affected organ. In

dealing with tuberculosis, in which the fight depends upon the powers of vital resistance, it is the endeavor to select a climate which will keep the physiologic reaction normal without the expense of energy, stimulated by sudden and great daily changes of temperature or humidity. This we have in Southern Louisiana. Carefully sifted empiric observations of the Ozone Belt support this statement, as shown by records of Dr. Durel and of the Camp Hygeia.

No climate is a specific for consumption. There is reason and good authority to believe that tuberculosis is less frequent in dry, forest places than in sandy, low, desert lands. Too much stress has been laid on temperature and humidity and altitude. Tuberculosis can be treated successfully in any climate or locality, provided there is an abundance of pure oxygen. In Louisiana, St. Tammany and Tangipahoa parishes, the patient suffers less than in other States, because the climate is equable, because of the proximity to the ocean. It is dryer than most low lands because of the porosity of the soil, and especially suited to those who do not bear cold climates well. Flat surface causes rapid evaporation, though the precipitation is great.

Change of scene and surroundings is often part of climate treatment. Each case should be a law to itself. Most patients do better away from home. Physicians should not send indigent patients from home; high altitude is for early cases, without rapid pulse and with good heart action. Louisiana, below parallel of latitude $31\frac{1}{2}$, notwithstanding the long summer and the mosquito, possesses such valuable conditions, the uniform temperature never reaching either extreme of heat or cold, permitting the patient in search of pure air to sleep out on a screened gallery or pavilion eleven months of each year without artificial heat.

The United States Climatological Report for February, 1911, has this to say about Southern Louisiana:

"Is low and level, the elevation being less than 60 feet above the Gulf level. Covington, 39 feet; precipitation, 59 inches. Hammond, 44 feet; precipitation, 55.57. Numerous lakes, bayous, creeks and sluggish streams form an extensive water surface, which is of much importance. The pine flats cover an area of 1,500,000 acres. We find them principally in St. Tammany, Tangipahoa and Livingston parishes. The soil is sandy. (It is here where the Ozone Belt is found.) Climatic conditions are marine in character. The proximity of the Gulf of Mexico and the numerous lakes and streams of this region conspire to modify the temperature conditions and prevent sudden changes therein. So, extremely warm weather

in summer and extremely cold weather in winter seldom occur. Southerly winds temper the climate; the annual mean temperature is 67.9°. January, the coldest month, mean temperature, 52.4°; July and August, hottest, mean temperature, 81.6°. The range in the annual mean temperature is very slight, and within one hundred miles of the coast mounts to only one degree. After passing inland the change is more abrupt. There is a narrow strip along the coast where the temperature has probably never reached 100° Fahr; only fourteen days in the last thirty-nine years has the temperature reached 95°. During thirty-six years there have been only seventy eight days when the maximum temperature in New Orleans rose to about 95°. Only four years in thirty-six has the temperature fallen to 20°. The average annual precipitation, and which is the most important factor entering into the climate of this section, is 55.76.

"Snow occurs on an average of once in three to five years. Rain in the eastern part, about once in three days, while the average relative humidity is high—83° at 7 A. M. and 72° at 7 P. M. in New Orleans. The air is seldom oppressive. Light breezes, which seldom fail during the summer months, make the warmest days of this section much less oppressive than might be expected."

From the above we learn: 1. The precipitation is above the average, the flat surface exposing so large an area for rapid evaporation, and with sandy, porous, sulphur-laden soil, which rapidly absorbs, generating ozone and preventing humidity.

2. A mild climate, with seldom rapid changes and more seldom extreme temperature.

3. Though a long summer, the heat is tempered by an ocean breeze, the moisture of which is absorbed in passing through the pine forests. Hence, the flat, pine-covered, sandy lands of South Louisiana, especially, will not make heavy drafts upon vital energy, thus hastening retrograde change, but seem to retard old age and make death more remote, as is shown by the number of prolific octogenarians living in this region.

DR. C. C. BASS, of New Orleans, read a paper entitled

Anti-Typhoid Vaccination.

A few general explanatory statements will be made relative to anti-typhoid vaccination, and then parts of my own experience, thought to be of interest, will be given briefly.

There is no standard method of preparing vaccin, and therefore samples from different sources differ in their strength and immunizing powers. The vaccin is made by washing the growth of typhoid bacilli from the surface of cultures on solid media, standardizing this to a definite strength (so many bacilli per c. c.) in

the usual way of standardizing bacterial vaccins in general, and finally sterilizing with either low heat or carbolic acid. Vaccins are sometimes made from broth cultures of typhoid bacilli instead of cultures on solid media.

The dose ranges from 500 million to 2,000 million. The number of doses is usually one to three. The second and third doses are generally twice the size of the first. The interval between the doses is generally one to two weeks. The vaccin is given hypodermically, requiring only the aseptic precautions necessary in giving other medicines hypodermically. It may be injected under the skin over any part of the body, but the arm, back or abdomen is generally selected.

The local reaction sets in within two or three hours and consists of redness, some pain, soreness, swelling, all of which may follow the course of the lymphatic vessels to the nearest lymph glands. The reaction reaches its height in twelve to thirty-six hours and then declines, but often it is four or five days before it has entirely subsided. The constitutional reaction sets in within two to twenty-four hours and declines in twelve to thirty-six hours, or sometimes longer. It consists of malaise, headache and fever from a fraction of a degree above normal to sometimes as much as 102 or even 103. Chills occasionally occur, also vomiting and diarrhea. The constitutional reaction may be entirely absent. If marked, the patient should take codein or some coal tar product, or both; aspirin is good.

My own experience with anti-typhoid vaccination is limited to a little less than three years and to 247 cases, of which I have record. A few others were vaccinated, but no record was kept for the first few months.

After a visit to Wright's laboratories in London, 1908, and after studying carefully the literature and statistics then available on the subject, I became convinced of the protective influence of anti-typhoid vaccination, and began its use first on my own self. Later some laboratory assistants and employees were vaccinated, and since then a good many medical students, doctors, nurses and others have been vaccinated from time to time. The vaccin employed was, in all cases, made by washing twenty-four to forty-eight hour-old cultures of typhoid bacilli from the surface of ordinary nutrient agar slants with normal salt solution and sterilizing with heat at 60° C. for thirty minutes.

The dose given has ranged from 500 million to 2,000 million bacilli. For a long time I adhered rigidly to the dose recommended by Wright, viz., 750 million the first dose and 1,500 million the second and third. Experience has taught that different lots of vaccin made in the same manner vary considerably in the local and constitutional reactions they produce, and also in their immunizing value. One lot produced violent and constitutional reactions, but no evidence of immunity could be found in the blood after two, or even three, large doses had been given. The vaccin recently employed produces a strong agglutination reaction after the first dose of 1,000 million in fourteen out of every fifteen cases.

It has been my practice for several months, and it is my opinion now, to give a sufficiently large dose, usually 750 to 1,000 million the first time, to produce a good local and constitutional reaction. After a week or ten days the blood is tested, and if a strong agglutination reaction is shown I advise the patient that further vaccination is probably unnecessary at present, but it should be repeated whenever, if ever, the blood reaction becomes negative. If, on the other hand, the agglutination reaction is negative a week or ten days after the first injection, a second dose, usually double the size of the first, is given. When a good vaccin has been employed this second dose should nearly always be followed in a few days by a strong agglutination reaction, and no further vaccination is necessary at present. The third dose may be required, in rare instances. I have in one instance given the fourth dose, finally getting a high degree of immunity, evidenced by the agglutination reaction.

The interval between vaccinations has usually been seven to ten days, but sometimes it has been considerably longer. In vaccinating medical students and many others it is very convenient to do it on a Saturday afternoon, as the constitutional reaction usually disappears so that the patient is able to go to work again on Monday. In only three of my cases do I know of reactions strong enough to incapacitate the patient on Monday following the vaccination on Saturday. In a few instances slight chills have occurred. The constitutional reactions in my cases have varied from none up to a temperature of 102°, headache, malaise, occasional diarrhea, and chills or rigors. It is peculiar that a patient may sometimes have a severe reaction following the first

dose and none at all following the second and large dose, or *vice versa*. The probable reaction following the second dose is not indicated by the first reaction.

The blood of eight persons vaccinated over two years ago with establishment of good agglutination reactions still gives strong reactions. This agglutination reaction may be taken to be an indicator of immunity, as is generally believed. One c. c. of blood from one of these persons kills 10,000 million typhoid bacilli in the test urine in two hours, and another one tested kills 300 millions bacilli. It is probable that it has the same or greater bactericidal strength *in vivo*.

Positive agglutination reactions do not, as a rule, continue more than a few days or weeks after an attack of typhoid, and yet one attack of typhoid usually confers lifetime immunity. So far as the agglutination test (an immunity reaction) indicates, therefore, vaccination furnishes more permanent immunity than does an attack of typhoid fever.

Of the 247 persons I have vaccinated, one has had typhoid, and, in fact, had it when he was vaccinated. He had been complaining of headache and malaise for several days, but had not taken his temperature when he was vaccinated. He had a moderately severe reaction, but, after two days, came back to the laboratory to work, when his temperature was taken and found to be $101\frac{1}{2}^{\circ}$. He went to bed and had a mild typhoid fever, lasting eighteen days. Typhoid bacilli were grown from the blood. The short duration of the fever after it was recognized, and the previous history, indicate that he had typhoid fever at least three or four days before he was vaccinated. This case indicates that the vaccin may not be very harmful if unintentionally given during an attack. Over two-thirds of the 247 vaccinated have been seen or heard from within the past thirty days, and are known not to have had typhoid; and most of them still give strong agglutination reactions. All have been requested to notify me if they ever have typhoid, and it is probable that none have.

The 247 vaccination cases, of from a few weeks to nearly three years without the occurrence of a case of typhoid, is too small a number, and the time elapsed since vaccination is too short to be considerable evidence on the subject, and I want to be distinctly understood as not representing them as such. It is of note, how-

ever, that at least six students of the Tulane Medical College had typhoid during the session, but none of them had been vaccinated.

In conclusion, I wish to emphasize that, though typhoid vaccins are variable, and though there is considerable experimental work necessary before the most can be accomplished, the evidence of immunity is so strong and amount of inconvenience and discomfort is so small that doctors, nurses and others frequently exposed to typhoid infection should take advantage of vaccination. The agglutination test should be used, both to determine when immunity has been secured, and, therefore, as a guide, and also as a check on vaccins with low immunizing powers. The quick macroscopic typhoid agglutination test can be made in one or two minutes, and has many advantages over the usual microscopic test for this and other purposes.

DISCUSSION OF DR. BASS' PAPER.

DR. WILLIAM KRAUSS, Memphis, Tenn.: I did not expect to be called upon to participate in the discussion on this paper. I have not had any personal experience with anti-typhoid vaccination, and consequently I am not in a position to discuss the paper of Dr. Bass. However, I was much interested in his report. I think he is to be complimented on the work he has done. We are getting close to that question, in order to clear up doubtful points to which Dr. Bass has called our attention. With Dr. Duval, I do not believe there is any identity between the agglutination reaction and the immune bodies. The experiment has long since been made, indicating that the agglutination reaction is a reaction of infection only. When you enclose a culture of typhoid in a celloidin capsule and place it in the peritoneal cavity of an experimental animal, giving you a condition in which the production of immunity is entirely excluded, yet in such cases, so long as the capsule is present, there is an agglutination reaction. That is positive proof we are dealing with a separate substance here. Then, too, clinically we know that a great many times we find cases of typhoid fever that run a very distinct course, in which the agglutination reaction is transient, or, as is usually the case where only one or two tests are made, it may not be obtained at all,

and yet there is no question about immunity in these cases. Experiments made with blood cultures always indicate that. In the beginning of the course of typhoid fever a blood culture is positive in a large per cent of cases, yet it is just at this time that the agglutination reaction has not yet appeared. That, however, does not detract from the merit of the paper, nor does it detract from the value of the work that Dr. Bass has done.

DR. J. B. ELLIOTT, New Orleans: I believe in this thing very thoroughly. I have been watching this work for two years, and I am advising all of my patients who live in New Orleans to be vaccinated when going off to summer resorts. I shall certainly have it done in my own case. No harm can be done by it, and the reports from the British and German armies, as well as from the American army, are little short of marvelous. Let us take a group of two hundred men in an engineering party who were out thirty days. When they got back to Washington there were twenty cases of typhoid fever, and these twenty cases occurred among those who were not vaccinated. Of this group of 200 men, 160 were vaccinated and forty were not vaccinated; twenty cases of typhoid fever occurred, and every one of them among the unvaccinated men. This is pretty conclusive evidence of the value of vaccination against typhoid. In one of the army posts in Montana they are using typhoid vaccin in cases of typhoid fever, giving it during the attack, and they claim that the attack is shortened.

Dr. Bass quoted a few minutes ago the case of Dr. Hyde, who had typhoid fever and was vaccinated after he had the disease, and his case was a mild one, lasting only eighteen days. I, personally, do not believe in aborted typhoid fever. Aborted typhoid means, to me, paratyphoid, not real typhoid. We had an abortive case of typhoid in the last thirty days in one of our institutions. The patient was vaccinated on Saturday, again the following Saturday, and on the third Saturday. On the fourth Saturday he got a temperature of 103°. I immediately telephoned Dr. Bass. We hunted for typhoid bacilli in the man's blood, but it proved to be a case of paratyphoid. It was a typical case of paratyphoid fever of twenty days' duration. There were three injections of vaccin given, one after the other.

I am a firm believer in anti-typhoid vaccination. I am willing to do anything to prevent anyone from having typhoid fever.

DR. WILLIAM KRAUSS, Memphis, Tenn., read a paper entitled

The Role of the Gametes in Relapsing Malaria.

A careful and thorough review of the literature on this subject makes it appear much more complex than at first blush one would suppose. The monograph of Craig, appearing in the *Jour. of Infect. Dis.*, Vol. VI, 1907, has reopened the discussion on a subject presumably closed since 1901. We now have four possibilities concerning relapsing malarias, only two of which can now be regarded as settled.

The first of these, of course, is that of reinfection. Clinically and epidemiologically, this can be excluded as a possibility in a certain proportion of cases. Cases of recurrent malarial fever showing typical periodicity taking place in an endemic area may in some instances be regarded as reinfections. If the exact exposure can be determined, the matter is settled with respect to such a case. Examination of the blood of such cases will show at least a large proportion of the growing parasites in the red blood corpuscles to be schizonts. Any gametes present show no aberration of form and can be readily distinguished as typical macrogametes and microgametocytes, even very early in their development.

The second form of relapse may occur some months after the original infection and at a point remote from the focus of original infection. I have had the opportunity of observing a number of such cases during some fifteen years of malarial research. Precisely because this mode of reinfection is so simple and so easily understood, and yet so baffling to very many otherwise well-informed men, and because it has such a tremendous bearing on the endemicity of malarial fevers, it becomes the most important and interesting phase of the subject. In this class of cases a patient in apparent good health, with a history of a siege of intermittent or remittent fever last year, will come, say, into a private sanitarium or lying-in hospital. Malaria is not endemic here, but mosquitoes occur. The patient is placed in a screened room containing some sterile anophelines, which, of course, cannot escape. He (or she), at the end of four weeks or longer, in one case in mind just two days after confinement, had some rather unpleasant prodromata, and on the fourth day (March 27) had a violent chill. The month of March had been unusually warm. On account of

such an occurrence in this critical period of the puerperium much alarm was felt, but an examination of the blood showed a rather rich infection with tertian schizonts and some gametes. Proper treatment prevented further recurrences. This woman had not had a malarial attack in eight months. There had not been any known malarial fever in this hospital in two years. What obviously happened in this case, and has occurred so often in my experience as to make it a commonplace, was that the patient brought her own gametes along, and, being unable to use them as they were, she gave them to the anophelines, who handed them back to her made over fresh for business. We can apply this principle in a great variety of ways and account for nearly all the "watermelon"- "drinking water"- "ice cream"-malaria, and all the many fanciful causes of malarial fever heard of from persons who think there is such a thing as a mosquito theory and that they have a mission to refute or disprove it.

The other two known modes of recrudescence of malarial infection, and which endeavor to take into consideration such cases as recur "without the intervention of the mosquito," are still under discussion. When we read the text-books on malarial infection we have to study between the lines to get any information. Ever since the publication of Laveran's first announcement, in November, 1880, efforts have been made to harmonize the blood findings with clinical symptoms and epidemiological effect, and the last chapter has, indeed, not yet been written upon the subject. There is complete harmony among all the writers after "resting bodies" were first differentiated, that they are rather constantly associated with relapses, chronic malaria, larvate and persistent infection, and with endemic intensity. There is harmony also to the effect that, in the earliest stages of an infection, these bodies are not so regularly found. Marchiafava and Bignami go into relapsing and chronic malaria at some length, and associate them with the presence of "resting bodies" without getting away from the general idea that these bodies produce of themselves no symptoms, but that they forebode relapses. In Thayer and Hewetson's monograph, Councilman is quoted as saying that if crescentic bodies are present the patient has remittent fever or cachexia. Canalis, as early as 1889, insisted that he had seen unquestionable evidence of sporulation in the crescentic and ovoid bodies, and that these took a

longer time to develop. Golgi, at this time, also accepts this view, and says that, if these changes are found, the paroxysms of fever occur at longer intervals ("*febbri malariche a lunghi intervalli*") and are associated with new forms developed from the crescents.

With Canalis, he regards them as a constant menace of further paroxysms. Antolisei and Angelini (1890) have observed bodies, as described by Canalis, in the clinic of Bacelli. The bodies showed eight or ten segments. Schaudinn's picture shows eighteen; in Maurer's and Ruge's pictures, and in the description of Canalis' segmenting "large body" the number appears to be greater than ten. In one picture I observed in 1905 there were fifty-six crescents to 300 leucocytes and one segmenting body with a very large "restbody" attached contained in twenty-eight schizonts.

Coming back to the literature of the relation of gametes to relapses, we find the statement in Ruge, Manson, Mannaberg, and in the monographs of Christophers and Stephens, the Plehns, and many others that might be named. Loeffler, in his article on malaria in the *Deutsche Klinik*, refers to Schaudinn's parthenogenesis, but attributes some of the relapses, even in those returned from the tropics, to the swarming of hibernating infected anophelines. He cites authorities who examined the stomachs of such mosquitoes and found gametes in them. Deaderick, in his book, "A Practical Study of Malaria," makes a brief reference to relapses, accepting Schaudinn's findings, and reproduces his pictures, but not in colors. Nothing is said concerning relapses in general. It seems that, with the discovery of the sexual forms by McCallum in 1897, and the subsequent work of Ross, Manson, Grassi, Feletti, Dionisi, Bastianelli, Bignami, Celli, Koch, Ziemann and others, clearing up the mosquito cycle of malarial parasites, too much was taken for granted, and the cases of malaria without mosquitoes or endemicity seemed to be regarded as unauthentic and not worthy of note. Even up to the time Schaudinn made his brilliant and ingenious experiments, enabling him to see sporozoites entering red blood corpuscles, this phase was taken for granted.

With respect to the frequency of recurrences of malaria in the different species, Mannaberg, in his book, says:

"Werlhof claims that the tertian forms usually recur in the second, quartan in the third week, and on those days in which paroxysms would have occurred if there had been an uninterrupted continuance of the fever.

"Barudel drew, from the investigation of a large amount of material,

that quotidian fevers relapsed most commonly on the seventh day, tertian on the fourteenth, and quartan on the twentieth.

According to Borius, relapses occur preferably on the seventh, fourteenth, twenty-first and twenty-eighth days. [This is in accord with popular belief.] Among 226 cases observed in Senegal, 128 had regular relapses, and of these, 18 were on the seventh, 67 on the fourteenth, 31 on the twenty-first, 9 on the twenty-eighth day. Ninety eight cases relapsed differently (ninth, tenth, sixteenth, twentieth day). Borius remarks that all these people took quinin in the interval, and he is convinced that relapses, in the majority of cases, occurred on account of stopping it."

He quotes Livio Vincenzi as observing seven-day relapses of quotidian paroxysms, a chart showing two, two and three quotidian paroxysms, respectively, and that in each case he only found small ameboid forms. (This is very much to be doubted; he doubtless failed to differentiate small gametes.) Mannaberg further calls attention to the uniform presence of gametes in true relapses which must be distinguished from reinfections. As collateral causes he cites Bacchanalism, excessive venery, colds, "dreams," indigestion, exposure, etc.

Ruge, *Centralblatt für Bacteriologie und Parasitenkunde*, 1902, Vol. 32, pp. 776 *et seq.*, undertakes to solve some problems of the malaria question. He endeavors to put together findings showing the relative number of macrogametes and microgametocytes in tertian infections with special reference to epidemiology. As a rule, although upon first appearance of gametes, the male elements are relatively numerous; these tend to diminish gradually. Schaudinn, in the monograph written at Rovigno in 1891 (*Arbeiten aus dem Kaiserlichen Gesundheitsamte*, Vol. 19, pp. 169-250), shows this very clearly. He especially calls attention to the fact that the male gamete, with its relatively large, loose nucleus and sparing cytoplasm, is poorly equipped for prolonged non-vegetative existence, but is distinctly designed to yield its very rich nuclear chromatin to younger elements, the microgametes, which are to fertilize the macrogametes, and that they readily disintegrate under adverse conditions. This causes them to disappear, leaving only the females. In his case, in which he made a number of smears and arranged the pictures so as to make a perfect cycle, he very clearly describes the very picture Antolisei attempted to describe in 1889. It should be stated here that Schaudinn's patient had her typical malarial paroxysm only after the maturation of the resulting schizonts—i. e., forty-eight hours after the segmentation of the macrogamete, and the next group of merozoites developed

into gametes. This gives us just the kind of cycle that will account for the long-interval periodicity of relapsing malaria.

In our clinics we have for some years referred to such cases as "female infections," and have found them very difficult of eradication. We have taken it for granted that the last word had been said on this subject until Craig's article appeared in the *Journal of Infectious Diseases* (January, 1909). In this very exhaustive monograph Craig says he has never seen the pictures that can be interpreted as segmenting gametes, and he develops what appears to have been built up from the observations of Mannaberg in his earliest work, who placed the estivo-autumnal parasite into a different genus from the tertian and quartan, on the ground that this parasite distinguished itself by the formation of syzygia (intra-corporal conjugation), after which the parasite became differentiated so as to form crescents. Later, others, notably Ewing and Wright, pictured these conjugations. Ewing ("Clinical Pathology of the Blood," 1903) considered these as stages antecedent to gamete formation, but said they were not peculiar to any one species. It is now definitely known that conjugation has nothing whatever to do with the stages of development of gametes. Craig now puts forth the idea that this plastogamy is a stage in the development of encysted bodies containing schizonts, and which may be liberated at any favorable time. He cites a mass of material showing that plastogamy is a favorite mode of fertilization in the animal kingdom. It would make this paper too long to go into this theory of Craig's any further, and I have no desire at this time to prejudge his work, but I intend this summer to subject it to some control. For the purpose of this present discussion I shall quote the opinions of only two men. Schaudinn says (p. 215, *loc. cit.*): "*Plastogamie kommt bei den Malaria-parasiten nicht vor.*" Calkins in his book ("Protozoology," Lea & Febiger, 1909) says:

"It happens in most of the common rhizopods * * *, and it has been shown that these unions have nothing to do with the actual process of fertilization. It is impossible to state that no stimulation whatever results from such plastogamic union, especially if it is followed by nuclear union of karyogamy, according to the account given by Craig; but it is difficult to believe that two widely different processes of fertilization should exist in the same organism."

In my opinion, the weak part of Craig's hypothesis is that all the historical, morphological and epidemiological evidence at

hand favors the view of Schaudinn rather than that of Craig. We have gone over all the evidence tending to show the correlation of gametes with relapses, and the preponderance of macrogametes over microgametocytes in old infections. For instance, even as early as 1882, Laveran writes:

"I do not believe there exists a constant relation between the forms under which the hematozoa appear in the [peripheral] blood and the clinical manifestations of paludism; one can only say that certain forms are more often seen in certain cases, *the crescents, for example, in relapses and in malarial cachexia, as I have demonstrated long ago.* * * *" (Italics mine.)

I shall now append, in parallel columns, the descriptions given by Antolisei and Schaudinn. It should be borne in mind that in the one case we have the description of a finding in an organism concerning which very little was known, and in the other the observation by the most approved staining methods, practically at the bedside, after the biology of the plasmodia was well worked out. Judge in this light, the parallel must appear striking:

ANTOLISEI (from Thayer and Hewetson): "Antolisei, in 1890, in a careful study of the parasite of tertian fever, agrees with Golgi in the main points. He has, however, met with Golgi's second form of segmentation only, while he asserts that the third variety of segmentation is a degenerative process. He describes this process of vacuolization at length" (speaking of the large, "overgrown" bodies, declaring that ordinary segmenting bodies never grow so large—showing that he is describing macrogametes). "When the pigmented body has wholly destroyed the red corpuscle, and is free in the blood current, one sees, at a certain time, the development, toward the periphery of the body, of a spherical area (S.'s fig. 104), into which the pigment granules, which are in very active motion, never enter. Within this area one may see a white, sharply outlined sphere, about which there is often a vacuole, which has a semicircular appearance because the sphere does not lie in the middle, but presses to one side (S.'s fig. 105). Later

SCHAUDINN (*loc. cit.*, pp. 236-7): "Fig. 104. The chromatin has condensed itself in one-half of the bean-shaped nucleus, collected in coarser, deeply staining clumps and strands, whilst the other and perhaps greater half is stained more diffusely, containing less chromatin clumps, which are smaller. Fig. 105 represents a macrogamete which clearly permits the recognition of two different nuclei. One of these is filled with thick chromatin clumps and reminds one of the nucleus of a schizont prior to the nuclear multiplication. It is deeply stainable, smaller than the other, which contains but little, loosely divided chromatin, and consequently stains very pale. I believed myself justified in inferring that this stage was derived from the former by the separation of the half containing the most chromatin. Fig. 106. Double nucleated macrogamete; the pale nucleus corresponds with the similar picture in fig. 105. The more chromatinic (chromatinreiche) nucleus is seen in the stage of equatorial plate—i. e., in the presegmenting

there develops elsewhere in the protoplasm of the organism numerous smaller spherules of varying sizes (S.'s fig. 106). Between these lie the pigment granules, which become motionless, while in the remaining protoplasm the activity of the movements seem to increase. Gradually more spherules appear, of varying size, often becoming steadily smaller, so that finally the whole body is represented by a collection of minute spherules with sharp outlines, between which lies the motionless pigment; about them is an outer shell, which possibly represents the outer, more resistant, layer of the red blood corpuscle. In the meantime there arises a sort of hernia through the outer, more resistant layer, which may take various forms; inside of this, new spherules develop (S.'s fig. 109). This process of 'vacuolization' Antolisei considers to be degenerative in nature, as does he also that of flagellation, which is seen to occur in large bodies exactly similar to those which undergo vacuolization."

stage. Fig 107. A macrogamete, which, by constriction, is divided into two unequal portions; the left contains a greatly enlarged, palely staining nucleus and thickly piled pigment granules; the right, four typical schizonts. Fig. 108. Although we do not find the constriction here, we can recognize clearly by the staining of the plasma and disposition of the pigment a separation of the macrogamete into two portions—the pale nucleus, which is still more swollen and lies in a darker, more pigmented area, whilst the coarser, alveolar, sparsely pigmented portion shows now seven nuclei. Fig. 109 is similar, but here there is again an external constriction; segmentation stages of nuclei more numerous. Fig. 110 represents a typical stage of schizogony to which is attached a large, disintegrating restbody, which shows very plainly its origin in a similar picture in fig. 109.

"Since then I have seen not infrequently single such developmental stages as described above, in preparations from several other cases." Schaudin here states that after McCallum had definitely fixed the position of the resting bodies in his investigation of the halteridia, in 1897, Grassi expressed the belief that the "macrospore", and most possibly also the "microspore," may multiply by parthenogenesis, and that they accomplish this by the modality known as "division by budding."

Practical experience in the field, while tending to show that gametes are very difficult to eradicate, proves that, with their removal, relapses do not recur. This might, of course, have a similar sterilizing effect on the encysted bodies of Craig. In any case, all the evidence tends to show that when there are no gametes there will be no relapses, although there may be reinfections.

To sum up, then, we have recurrences of malarial fever by means of reinfection from without, by reinfection from one's own gametes, by resegmentation of macrogametes (without the aid of anophelines and reintroduction), and possibly by conjugation or plastogamy, according to Craig.

In any case, it should be remembered that it is just the symptomless gamete carriers who perpetuate the infection, and that every opportunity should be made use of to examine the blood of persons who have suffered from malarial attacks, and, if gametes are found, to use active and persistent cinchonization for at least thirty days. In my experience it has seemed more desirable, although I am not borne out by tropical workers, to interrupt this quinin therapy from time to time, and continue it somewhat longer.

It is my opinion that a campaign directed against gametes is worth more in eradication of malaria than all the other methods combined. We will probably always have gametes; let us see that they remain sterile.

DISCUSSION OF DR. KRAUSS' PAPER.

DR. J. B. ELLIOTT, New Orleans: If I go from a warm climate like New Orleans to a cold one, after I have been there from two to three weeks I have a chill, with a fever of 102° . If I go to some degree of altitude, where there are no mosquitoes (and I do it every summer), I get a chill. For instance, in Boston or England I will have a temperature of 103° that will last three days. How do you account for these recurrences?

DR. KRAUSS (closing): Dr. Duval has asked a question with respect to the extra-corpuscular parasite. In 1892 Maurer made some observations upon which he bases the assertion that, in the case of estivo-autumnal infection, the schizont does not enter the red blood cell, but grows on the surface of the cell until it attains some considerable size, and when it reaches the pre-segmenting stage then it sinks down into the body of the red blood corpuscle and completes its development there. He uses a special staining method. Of course, we cannot go into the technic at this time, because it is too voluminous a subject; but, briefly, he takes sublimate alcohol, uses four strengths of stain and very dilute solutions, whereby he claims he can stain differentially those portions of the cytoplasm of the red corpuscle from which the hemoglobin has been eaten out. He can show the parasite has been there, and also exhibits photomicrographs showing parasites without any red-cell body around them at all. There is no doubt that that accounts perhaps for the atypical type of fever in these estivo-autumnal infections. In other words, so long as the parasite remains inside,

entirely surrounded by the red blood corpuscle, none of the toxic elements can be spilled into the plasm, but when it develops on the surface we get a continued and irregular fever, which is, therefore, not due to continuous diffuse segmentation. The estivo-autumnal type of parasites seem to be able to mature in about as compact groups as the other species of plasmodium.

There are unquestionably quinin-fast organisms. Time and again we have seen it and the quartan parasite the plasmodium malariae of the zoologists, is the one that is most easily immunized against the quinin, and for this reason it seems difficult of eradication. I remember one poor unfortunate infected individual who was troubled for six months before I sterilized his blood. I know this, because I made these blood examinations myself, and there is no difficulty in differentiating the quartan parasite.

The duration of the life of the gametes in the spleen and bone marrow in the interior of the body is unknown. I cited the case of a woman who reinfects herself by mosquitoes. On account of there not being any vegetative stage, they are not readily attacked by quinin, because they do not need it. They are not feeding. *v.* Diessiny has called attention to the fact, which has been corroborated by others, that quinin enters into combination with the hemoglobin and fixes it so that the parasites are unable to feed on it, and consequently they are starved to death. This explains why gametes are more resistant, but not absolutely so.

There is no question but what arsenic is better in these cases. Arsenic will put an end to gametes that anybody might carry in his blood. There is no doubt about it.

The cases cited by Dr. Elliott are exceedingly interesting. I have heard of these observations a number of times; I have been told by patients of other physicians who came to me for blood examination that, after they were away three weeks from home, they have had a malarial chill. I do not know whether there was a malarial chill or not, not having had slides of them. I have had more experience lately in examining the blood of laymen coming to me first-hand, because laymen learn about malaria through the magazines, and they come to the laboratory specialist before consulting their doctor. These patients tell their experiences, and I often get such histories as Dr. Elliott's. Still this is only hearsay. On the other hand, it is quite in accord with the known facts that,

the longer the duration of the infection, the greater the proportion of gametes, and it is easy to assume we have parthenogenesis in such cases where the female gamete in the circulating blood of the individual is making an effort to perpetuate itself, undergoes parthenogenesis, the patient has a malarial paroxysm, takes treatment, and that is the end of the infection. In countries where infection is persistent throughout the year an individual is more apt to carry gametes than in localities where there is only occasional prevalence.

What Dr. Harris has said with reference to visceral malaria is not debatable. There is no question but what the estivo-autumnal parasites particularly have certain sites in which they remain for a considerable time. In fact, I should like to call attention to what Laveran said as early as 1882, that the parasites found in the peripheral circulation are not always parallel with the clinical symptoms of the patient, because there may be visceral infections. There is no way to find out whether or not such patients are sterile.

DR. W. H. HARRIS, New Orleans, read a paper entitled

Upon the Pigment and Plasmodia in the Tissues of Pernicious Malaria.

Although the texts furnish but brief description of the pathology of malaria, its study in general or in special detail, as found in journal literature by such men as Bignami, Bastianelli, Guarneri, Dock, Thayer, Flexner, Councilman, Ewing and others, and the very recent work of Brown on the pigment has covered the field quite fully.

There still remain, however, many points not alone interesting, but important.

The recent work of Mary Rowley Lawson¹ upon the estivo-autumnal parasite, indicating its supra-erythrocytic development, has been of additional interest.

The consideration of the reason for the clinical varieties of the pernicious type, having one common pathogenic factor, has been but little investigated.

In the cases we have studied the clinico-pathological picture has focused attention. Why, with one common offending protozoa species presenting identical blood film pictures, do we see diverse

clinical entities? e. g. hemoglobinuria, hematuria, comatose, algid, etc.

The paper of Dr. Brem, of the Canal Zone, read at the meeting of the American Tropical Society on May 20, 1911, at New Orleans, represented work along these lines. He studied the blood of malarial hemoglobinuric patients for the purpose of finding specified hemolysins, or, as he calls them, "erythrolytic substances," in such cases. From his experiments *in vitro*, it would seem that such substances do exist. It would seem, however, that such parasites would produce similar hemolytic substances in the comatose cases, in which we find similar or more aggravated cases. This coma, however, with absence of evidences of hemolysis, may be attributable to a phase of the parasite, its virulence or other biological characteristics.

The frequent presence of jaundice in black water fever may be accounted for by such hemolysins, with a consequent hematogenous jaundice, yet we must remember that Flexner had described clearly the hepatic necrosis of malaria which would bear upon icterus production.

Ewing,² in his excellent and extensive work, has shown that in the hemoglobinuric cases studied by him that the parasites had concentrated their numbers in the kidney vessels and capillaries and brought about marked pathological changes, even necrosis *en masse* of the renal epithelium.

Our two comatose cases showed a tremendous number of the parasites present in the capillaries of the brain. In some of these vessels, cut longitudinally or obliquely, every red cell was infected with one or more parasites. Associated with these were degenerative changes in the brain substance.

It would thus seem that the organisms, as for organisms in other diseases, have selective sites for disease production in greater part dependent upon the locus minor resistentia of the host.

Prior to further details upon the plasmodia and the pigment in the sections of the tissues of our comatose cases, a few notes upon the gross findings will be given.

All organs were practically negative, from the macroscopic standpoint, excepting the brain, bone marrow, spleen and liver.

The brain showed a distinct discoloration, particularly in the cortex. Here was seen a rather dirty gray or smoky color, which

was apparent to a slight extent in the medullary portion. A few punctate hemorrhages were noted in the medullary portion.

The bone marrow was mottled with yellowish red and dark bluish gray areas.

The spleen presented the usual slate-color appearance externally. Upon section it was of a chocolate-brown color almost brown-black, with a bronze tinge. Other characteristics were those usually seen in such cases.

The liver showed marked pigmentation, presenting upon section a similar color to that of the spleen.

MICROSCOPICAL NOTES.—*Pigment*: This was found as very heavy deposits in the spleen, liver, bone marrow and brain, to a less extent in the kidneys, lungs, lymph nodes; a very little in the thyroid and heart; none in the pancreas, gastro-intestinal tract, trachea and larger blood vessel walls. Its location in these organs and tissues was chiefly intra-vascular, as either free pigment or phagocytized, chiefly by the large mononuclears, and occasionally by the polymorphonuclear neutrophiles, and even by the desquamated endothelial cells.

In the liver, heavy deposits were seen contained within the epithelial cells or free in the subsinusoidal spaces and vessels.

In the kidney, aside from the pigment in the vessels, deposits were seen into the renal epithelium.

In the spleen, bone marrow and brain, the pigment, present in large amounts, was either found free into the vessels' sinuses or contained within the leucocytes, chiefly the large macrophages.

The free or intravascular pigment occurred mostly as small, irregular, needle-like crystals or as small oval masses, resembling extra-cellular nuclei. These were of a brown-black color. That pigment contained within epithelial cells presented an almost amorphous powder-like appearance, resembling a granular detritus. This was of a lighter brown or rusty color.

The former pigment described was probably definite acid-hematin crystals, whilst the latter was most likely hemosiderin.

Brown's³ recent work upon malarial pigments has been quite conclusive as to its entity.

As the plasmodia feed upon the red cells, probably by the action of a proteolytic enzyme, it appropriates from the hemoglobin a proteid material for its nourishment and rejects, as a katabolic

product within the cells, the acid-hematin or an intermediate product, hemosiderin. The first was the substance considered by many workers as melanin, since it gave no iron reaction to Prussian blue test, or, even as Milner⁴ claims, to the micro-chemic test. Brown has found evidences of iron by the spectroscopic examination.

His conclusive demonstration of the differentiation of the pseudo-melanin of malaria pigment and true melanin was by bleaching reagents and solvents. He used as melanin the pigment of three negro skins, two choroids and five melano-sarcomata, and contrasted these with the malarial pigment derived from the spleen of six pernicious malarial cases.

He obtained positive bleaching changes in all the melanin controls by K. M. N. O., 25 per cent, and peroxid of hydrogen, 30 per cent, whereas negative results were given with the malarial pigment. With the following solvents—saturated solution of lithium carbonate, 2 per cent; potassium hydroxid, ammonia hydroxid, alcohol, potassium hydroxid, acid alcohol, acid ether, ammonium sulphid, hydrochloric acid, and sulphuric acid—he obtained positive results with the malarial pigment and negative results with the melanin controls.

His results demonstrate conclusively that there is an essential difference between malarial pigment and melanin, although many thorough workers of very recent date have held an opposite view.

Plasmodia: In studying the tissues of the two comatose types, the localization of the plasmodia was interesting.

They were most numerous in the brain and bone marrow, quite numerous in the spleen, whilst but few were found in the kidney and liver, and none in the other organs or tissues.

In the brain, the larger vessels and capillaries were greatly congested, and in some of the longitudinally-cut vessels every red blood cell was infected with one or more parasites. None of the plasmodia were found without the vessels, although some slight swelling of the endothelial lining was noted. An albuminous degeneration was seen in the tissues in the vicinity of these vessels.

Our hypothesis as to the causation of the coma have nearly all previously been given by Ewing, as follows: "That it may be referable (1) to massing of young ameboid parasites in the cerebral capillaries; (2) to embolic processes, with temporary occlusion

of vessels in small areas of the brain and without uniforming massing of the parasites in cerebral capillaries; (3) to the general toxemia of the infection."

Aside from these, it would seem that the concentration of such large numbers of parasites in the cerebral capillaries would produce a local toxic effect, a supposition that would be reinforced by the degenerative areas found surrounding them.

Again, this latter hypothesis could well apply to the production of the algid form, because of plasmodia concentration in the gastro-intestinal tract, as well as production of hemoglobinuric forms by a similar massing of parasites in the kidney, a point which has been observed by Ewing.

The blocking of capillaries by the swollen and desquamated endothelium as the causative factor of malarial coma is still another possibility.

The bone marrow tissue sections show numerous plasmodia present. In these sections the rôle of the large mononuclears or macrophages, as both a phagocyte and scavenger in malaria, is beautifully demonstrated. These cells are found containing one or more plasmodia and large masses of pigment. The plasmodia are quite uniform in their stage of development, this being approximately twenty to twenty-four hours.

The degenerative changes and the active changes seen in the bone marrow serves to account for the severe anemia often seen.

Whilst numerous parasites were seen in the spleen, I have been unable, thus far, to find them in all stages of development as described by Ewing.

In the kidney, only an occasional parasite was found in the capillaries of the glomeruli.

No parasites were found in the remaining structures.

- REFERENCES: (1) *Journal Exper. Med.*, 1911, xiii, 263.
(2) *Ibid.*, 1905, vi, 119.
(3) *Ibid.*, 1911, xiii, 290.
(4) Virchow's *Arch. fur. Path. Anat.*, 1903, clxxiv, 475.

DISCUSSION OF DR. HARRIS' PAPER.

DR. WILLIAM KRAUSS, Memphis, Tenn.: This contribution of Dr. Harris is a most excellent one. The points he makes there very largely compare with the results we have gotten, ourselves.

With respect to the massing of the parasites in any particular area in pernicious malaria, it is not a new observation, but a corroboration of the observations that have been made, first by Bacelli and confirmed by others. But it is very evident the malarial plasmodia seem to have the love of traveling in schools. It is not unusual in making blood smears, taking six or seven slides from a single puncture, to find only one of the slides to have any considerable number of parasites on it. It is not difficult for them to mass at any considerable point and produce thrombosis or embolism, with intensification and localization of the toxic symptoms, giving the various types of localized perniciosæ, e. g., gastric, pulmonary, enteric, dysenteric, comatose, delirious, etc.

We have learned very little that is new with respect to the pathology of malaria. In reference to the hemoglobinuric fever, we have two sites for the hemolysis—one in the blood, and the other localized in the kidneys after probably primary thrombosis. In most conditions we find different things. In the latter we may find the parasites in the kidneys, but in the other form we do not. In fact, the finding of the parasites in the kidneys marks such cases as local perniciosæ.

Orleans Parish Medical Society Proceedings.

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DR. HOMER DUPUY and DR. W. H. BLOCK.

MEETING OF OCTOBER 23, 1911.

DISCUSSION OF DR. KOHLMANN'S PAPER.

DR. SHLENKER: For an intelligent discussion of prolapsus uteri we must first take into consideration mechanics of the uterine supports. The question arises, is the uterus suspended from its ligaments, or what does form the support of this organ? The observations of Tandler and Halban prove almost conclusively that this organ is not suspended, but merely supported, and its

position depends alone upon intra-abdominal pressure. We know that the normal position of the uterus is one of ante flexion, and when the organ is once displaced by such influences which disturb the intra-abdominal pressure, the forces which were previously directed on the posterior surface of the uterus are now acting on the anterior surface, thereby predisposing to displacement, or a prolapsus (a point brought out by the speaker when he quoted Schultze, saying, "The etiology of the prolapse was that of retro flexion").

We must now consider what are the uterine supports. We have the round ligaments, the broad ligament, utero-sacral, utero-vesical. Together with these we have the muscular structure of the pelvis, blood vessels and connective tissue. We know that the round ligaments are physiologically in a relaxed state and only serve as guys to limit the movement of the uterus during pregnancy. The utero-sacral, broad and utero-vesical ligaments are nothing more than reduplication of the peritoneum, and, not having a definite fixed point, cannot hold the uterus in its place.

Blood vessels likewise have no ability to sustain a prolapsed organ in its place, as is frequently demonstrated by nephroptosis. It then remains for the levator ani which forms the pelvis diaphragm, and, when its integrity is not impaired, assists in maintaining the intra-abdominal pressure, thereby keeping the uterus in normal position.

As the doctor stated in his paper, with the simple retraction of the perineum with a speculum, the uterus can be readily drawn down with an instrument, but, on releasing, promptly returns to its position, showing clearly that only when the organ is displaced does the support of the ligaments have any influence on the support of the uterus. We find in female children who suffer from spina bifida a congenital descensus, which is to be accounted for by the involvement of the fourth sacral nerve, which we know supplies the levator ani.

In conclusion, I want to state that this operation, as proposed by Prof. Wertheim, is, in my estimation, by far the most desirable of all others suggested for a prolapsed uterus, but is only indicated in those women who have passed the menopause, or who have been previously rendered sterile.

DR. KOILMANN (in closing): In my opinion, the levator muscle is not of great importance as a muscle, as Sippel, in Frank-

fort, mentions, could only support if in permanent contraction, what is impossible. Regarding the danger of this operation, I may mention that there is a good deal of danger, even if there are only a few deaths reported. With my cases, I never had any bad results. I believe this operation is superior to abdominal fixation in marked cases of prolapse. Statistics show a great many recurrences in abdominal fixation. In recent years Kocher and other operators have advised an operation called "Exhysteropeny." A part of the uterus is drawn out of the peritoneal cavity and sutured outside of the parietal peritoneum.

Miscellany.

A New Conception of Immunity.

ITS APPLICATION TO THE CULTIVATION OF PROTOZOA AND BACTERIA FROM THE BLOOD AND TO THERAPEUTIC MEASURES.*

By C. C. BASS, M. D., New Orleans.

Lysis of protoplasm, either protozoal or bacterial, by the body fluids, depends on two substances: (1) amboceptor, which is generally specific, but may sometimes be common, and (2) complement, which is common with reference to antigen, but is more or less specific with reference to the source of amboceptor. This complement in man's serum is more active with specific amboceptors in man's serum than with specific amboceptors in the serum of other animals.

When a foreign protoplasmic substance, protozoal or bacterial, is introduced into the tissues of man, specific amboceptors develop and may be demonstrated in the body fluids, especially in the blood-serum. These amboceptors are capable of dissolving large quantities of the same kind of protoplasm in the presence of sufficient complement, but are inactive in the absence of complement. Amboceptors are not destroyed by moderate heat (56 C.) or by considerable age.

Complement acts with specific amboceptors to dissolve and destroy large quantities of protoplasm in the presence of specific amboceptors against the particular protoplasm, but it is inactive in

* Reprinted from the *Journ. A. M. A.*, November 4, 1911.

the absence of such amboceptors. Human complement capable of acting with human amboceptor to produce lysis, though generally supposed to require at least moderate heat to inactivate or destroy it, as a matter of fact is destroyed by any temperature above normal body temperature (37 C.) and with a rapidity depending on the temperature. A temperature at 40 C. (104 F.) destroys the complement in human serum in from fifteen to thirty minutes, and prevents lysis, regardless of the amount of amboceptor employed.

Freshly drawn human blood contains little or no complement capable of acting with human amboceptors, but under favorable conditions it develops at a variable rate and in varying quantities, depending especially on the temperature at which the blood is kept. The most favorable temperature is considerably below body temperature. No human specific complement develops at ordinary fever heat, 38 to 40 C. (101 to 104 F.), such as obtains locally, and often generally, in most inflammations. Bacteriolysis or protozoalysin, by far the most important of the known protective processes of the body fluids of man through which the specific infecting organism should be destroyed, is thus prevented by the local or general temperature, regardless of the amount of amboceptor present.

In the event that human complement has developed in a blood (which it does under favorable conditions within a few hours), it increases in amount for a time. Then it again disappears in from thirty to seventy-two hours, according to various conditions.

When an individual is infected with the malarial plasmodium, *Spirochæta pallida*, the bacillus of typhoid, etc., his blood soon contains large amounts of amboceptor against the infecting organism. If such blood is drawn and employed as a blood-culture in the usual manner and at a temperature at or below 37 C., complement develops within a few hours, and, acting with the specific amboceptor, destroys the organism and prevents successful cultivation. This is the explanation for the many negative typhoid blood-cultures in the latter part of the disease when much amboceptor is present, while cultures in the first few days are generally successful. This may be obviated to some extent by employing special media, like bile, which prevents the development of complement. The same result can be obtained by placing the culture immediately at a temperature that will prevent the formation of complement, and

yet not high enough to destroy the organism. Theoretically and practically, so far as my experiments indicate, blood-cultures will be positive at any time when the organism is present in the blood.

Applying the principles set forth above, I have been able to keep alive and to cultivate without difficulty the three common forms of malarial plasmodia—*Plasmodium vivax*, *Plasmodium malariae* and *Plasmodium falciparum*. They have been repeatedly transplanted successfully. Up to the present writing, cultures have lived in citrated blood for over two weeks. The viability of my cultures has been confirmed by a number of my confrères here.

It is my opinion that the other blood-inhabiting protozoa and bacteria may be grown without difficulty, provided these principles are followed and appropriate technic is employed. In the case of malarial plasmodia, a special technic, apparently necessary, is that strict anaerobic conditions must be maintained throughout. This, however, is no doubt essential for the satisfactory cultivation of most pathogenic protozoa. Citrated or defibrinated blood is the most successful medium I have found for the cultivation of malarial parasites.

Applying this theory to therapeutic measures, we have reversed conditions, and we then desire to favor the formation and activity of complement. We may take, as a favorable illustration, an ordinary infected abscess. As a result of the bacterial toxin, inflammation ensues, with its accompanying hyperemia and swelling due to exudation of serum, and usually leukocytes. The latter engulf the bacteria, but are unable to destroy them for lack of complement, which cannot develop because of the local elevation of temperature.

Finally, sufficient necrosis occurs to give rise to a macroscopic cavity filled with pus. This may continue to increase in amount, and the bacteria live and multiply in it. If such pus is withdrawn and some normal serum rich in complement is added, it promptly becomes sterile, provided the matter is in sufficiently fine division so that the complement supplied and amboceptor already present in the pus can reach all the bacteria present. If the pus contains some serum that has recently exuded from the tissues, and if it is placed at proper temperature, complement develops and can be demonstrated by appropriate test. If, on the other hand, the pus has been in the cavity many days and at high temperature, it will

have passed the age at which it can develop complement under any condition. If such old pus is withdrawn and the cavity allowed to refill with new pus fresh from the living tissues, and provided the temperature is kept below the inactivating temperature for human complement, then large amounts of complement develop and the bacteria are destroyed by the combined action of amboceptor and complement. Such new pus, withdrawn and kept at appropriate temperature, develops an enormous amount of complement—in fact, much more than would an equal amount of blood—probably because of the increased number of leukocytes, the probable source of complement.

It should be stated here that complement will develop at quite low temperatures, but that the activity of human amboceptor and complement is much reduced at a temperature of 23 C. (73 F.) or less. Thus the very process it is desired to favor may be materially interfered with by too much cold.

We seem to have herein an explanation for the good derived from cold applications to inflammations, even to the effect of high and incidentally cool climates in tuberculosis of the lungs. The temperature of the diseased foci is lowered by the constant inhalation of cold air.

The possibilities along the lines suggested are so great and the work necessary for the evolution of technic adapted to each of the many problems, both cultural and therapeutic, that will be suggested from time to time and in which this theory plays a part so extensive that one worker will be unable to do any considerable part, and I therefore hope that others will take up this line of experimentation and confirm or contradict the opinions here expressed.

Communications.

THE IMPORTANCE OF TROPICAL MEDICINE AND HYGIENE.

To the Editors of the New Orleans Medical and Surgical Journal:

From the standpoint of the distribution of disease the world is growing smaller day by day, distances, so to speak, are being decreased by modern devices and intercommunication among human beings is increasing in an amazing way. Towns are growing in population and man is doing his utmost to upset the former balance in nature, propinquity being the order of the day. The disastrous effect of this is shown by the enormous increase in insect pests destructive to plant life and the money toll they take is colossal. Endemic and epidemic disease also find conditions ideal for their destructiveness.

As the urban population grows, the possibility of the increase of communicable disease is a thing to be feared and guarded against, and mankind will find it more and more important, as time goes on, to devote attention to preventive medicine, as it and the law of immunity are the only things that will prevent destruction. If the law of immunity alone is relied on the mortality and morbidity will be frightful.

If the conservation of health and life are considered of importance it becomes necessary to resort to the measures science teaches for such conservation.

There is a very great danger that confronts the people of the United States; it is the introduction and acclimitization of plant and animal organisms that cause disease, and for the reasons stated the danger is momentarily increasing.

No one can tell which dangerous exotic organism may be suddenly introduced, and this shows the very great importance of studying these lower form of disease-producing life in their original habitat and environment with a view of to their exclusion or to an early recognition to prevent their spread. Such fore-knowledge will be of the greatest value and may save untold suffering and prevent great mortality.

Unfortunately the history of medicine teaches that people are slow to learn and valuable time is often lost in not taking advan-

tage of scientific truth. It is difficult to overestimate the value of Tropical Medicine, and it is greatly to be hoped that valuable time will not be lost in waiting until some bitter experience awakens us to a realization of these fundamental truths. .

Mankind can secure health and happiness and a much greater longevity by the extermination of the entities of disease, and then the only menace will be from individual indiscretions.

Health and happiness may thus be maintained to the limit of existence. This great desideratum may all be brought about by preventive medicine, and the study of Tropical Medicine is only a natural amplification of it, made necessary by the rapid growth of modern conditions. It might be called mundane preventive medicine.

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The Academy of Natural Sciences, Logan Square, Philadelphia.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

The Cultivation of *Plasmodia Malariae* Outside of the Human Body.

The JOURNAL presents to its readers in this issue an article by Dr. C. C. Bass, reprinted from the *Journal of the A. M. A.*, of November 4, which, if supported by further experimentation, will establish Bass' work as epochal in the study of the malarial organisms, and probably will create a change in the ideas at present conceived concerning immunity.

Bass has demonstrated, to his own satisfaction and to that of his co-workers, that by raising the temperature of the medium to a point where complement is prevented, and yet at a point which will permit the growth of the organism, the plasmodia will grow in culture and will continue to grow; citrated or defibrinated blood under anærobic conditions was employed and the plasmodia cultures had been maintained for over two weeks. As the author himself states, "the possibilities along the lines suggested are so great" that we can only await with the highest degree of interest the next step in the evolution of so startling an announcement as Bass has made.

The JOURNAL must, however, among the first, recognize the great importance of the discovery and the large credit due to the originality displayed by the author of it. Such recognition is due and should be stated, so that all of our readers may share in the honor which must accrue to one of our own men, modestly announcing, from the Laboratory of our Tulane University, what may prove to be as great a theory and as large a fact as any evolved from any laboratory source in the present generation.

Far Eastern Association of Tropical Medicine.

The Second Biennial Congress of this Association will meet in Hong Kong, January 20 to 27, 1912. A most interesting announcement of this projected gathering has been received by the *JOURNAL*, and merits notice for more than one reason. The importance of the Congress is emphasized by the fact that one whole week has been set aside for the scientific program, which, as stated in the prospectus, contemplates the consideration of the following subjects: Protozoology, helminthology, cholera, plague, leprosy, tuberculosis, tropical fevers, including malaria; beri-beri, dysentery, surgery, obstetrics, infantile diseases, climate, hygiene and sanitation.

The recent New Orleans meeting of the American Society of Tropical Medicine showed the importance of such gatherings, and among the many problems now attracting the attention of the medical profession none is greater than that related to tropical medicine.

It is the recognition of these things which makes such a congress as the one announced possible, and the organization of medical men for the study of tropical diseases in the various centers where they may be seen and considered intelligently speaks for a wider dissemination of knowledge concerning the diseases in question.

Hong Kong may be too far away for many of us to go, but there will be some of our readers interested enough to want further information, and we are advised, in such case, that subscriptions for the meeting are fixed at ten shillings sixpence, and may be sent to Dr. Francis Clark, Secretary-Treasurer General, Hong Kong.

The First International Eugenic Congress.

A gradually increasing interest has developed in the science of eugenics, until it is to culminate in an international congress to be held in London, July 24 to 30, 1912.

In the beginning of the propaganda regarding this subject the field of interest was limited to sociologists and to a few laboratory workers, but to-day the whole scope of philosophic thought has been brought within the limits of eugenics and its divisions.

The prospectus of the Congress considers the discussion of

matters which are related to biology, historical and sociological research, legislation and social customs, and the application of eugenic principles.

The objects of the Congress are especially aimed at disseminating a wider knowledge of the subject and of creating centers of working organization for the development of the study of the science.

The headquarters of the proposed Congress are in London, and all interested are directed to the Honorable Secretary, Eugenics Education Society, No. 6 York Buildings, Adelphi, London, England.

Mistakes in Medical Education.

Dr. Dudley Tait, of San Francisco, in an address at the graduating exercises of the Oakland College of Medicine*, has uttered some emphatic points of criticism on modern medical education and it may interest our readers to have these abstracted with some commentary.

"State Medical Examiners seldom avail themselves of the splendid educational opportunities delegated to them by Legislatures. Only a few years ago California was credited with the possession of the highest standard of examinations for licenses. To-day, by reason of endless exemptions accorded organized pathies and isms (naturopaths), cancer fakers and healers, failure to investigate medical colleges, non-enforcement of the legal minimum standard of qualifications as determined annually by the Association of American Medical Colleges, neglect to extend what this State first inaugurated—*i. e.*, practical examinations—and finally the astounding lowering of the marking system enacted by the recent Legislature, to-day the California Medical Act has been robbed of almost all its power for good and relegated to the Massachusetts level—the lowest in the United States. Alone among the States, California may boast of having increased the number of its medical colleges during the past half decade. The matriculation list of one of the Los Angeles schools of osteopathy exceeds the total enrollment of the ten medical colleges of the Pacific Coast.

"The conclusion is self-evident: neither the profession nor the public wanted a high standard of medical education in California. We seem to be advancing rapidly toward the open door policy, thus hastening the inevitable realization of the socialistic dream of State control of health services and of medical education."

The instance of California is only parallel with that of other States in which the regular profession is not supported by any part of the citizenship, and where the usual indifference in most of the profession permits almost any legislative act to pass. The adherents of the irregular schools of practice are numerous because

* *California State Journal of Medicine* (Vol. IX, No. 10), October, 1911.

they are earnestly solicited; with the physician his usual contention is that his business is the practice of medicine and not proselyting people to a cult. What the end may be our California friend may have prophesied, but the "pathics and paths" *will not ask* for State control of the practice of medicine.

"In the opinion of many, the mere increasing of matriculation requirements constitutes the essential, if not the only, means of raising the standard of medicine. While no one will deny the desirability of a training in the fundamentals prior to entering upon a medical career, one is, nevertheless, justified in asking if the medical teaching faculty has advanced *pari passu* with the medical student body. After prolonged search I fail to see it.

"Has the clinician made a corresponding sacrifice of time or adapted himself to the standard of his biologically trained audience? In his honest endeavor to recede from time-worn didactic methods of teaching, has he broken absolutely with tradition and espoused the cause of scientific principles? Has he practiced less and investigated more? How many schools would dare answer affirmatively? Perhaps the solution will be found in the gradual development of a new type of teacher: the university clinician, capable both of intelligently bridging the academic and clinical years and of establishing a more profitable co-operation between the various departments of the university."

Such contention is less potent now than it might have been three or four years ago. The better schools have met the demand for better and more exacting evidences of preliminary education rather than higher requirements. The few schools with higher requirements may be classed among the privileged and without the rule. The irregularity in observance of the rules of admission may be a greater point of objection than any of these named.

What follows of Dr. Tait's address deserves full quotation, for there is much merit in his argument. His point of view, however, prejudices his statements—for he argues that, because a student has too much to do in four years of study, his preliminary education should be less in order that his practical work may be more comprehensive. Would it not be more exactly honest to say that the advance in medical knowledge has been so rapid and the breadth of its scope so extensive that the student without adequate preparation to begin its study is handicapped, and even with preparation the usual four years is not sufficient time to allow the proper study of the knowledge necessary to the practice of medicine on modern lines. As a matter of real and actual fact, the man who practises medicine to-day must be educated to follow the steps and the solutions of problems in research to be able to understand the application of the results—results which daily are

brought by the laboratory of research to the armamentarium of those busy with the sick.

Opinions may differ as to the technical training of students in the primary branches, but the main fact must remain that exact knowledge gained in any field related to the study of medicine, no matter by what process it is obtained, is a much better foundation than cursory information derived from a miscellaneous, even though broad, experience.

Here follows the most interesting conclusion of Dr. Tait's address:

"The fundamental question is, how may the necessarily limited time of medical education be most profitably employed in imparting to the student such knowledge as is most useful to him in his future career? How has the faculty answered this question? In the majority of instances, by confronting the student with additional subjects, additional courses, additional units, additional text-book details, additional parrot-like recitations, and with it all the four-year system is still religiously adhered to. It is just this cramming process, and especially the unfortunate appropriation of time by the teachers in the intermediate subjects, that causes tired and neurasthenic students; the able men are severely maimed, the weaklings are ruined for life as they become veneered with prejudice, having never learned to think for themselves or to work unaided. Starling aptly remarks that, in giving his whole soul to his work, the student loses his soul. How can we expect a tired student to exercise a trained reflective and analytic habit of mind on the numerous problems which present themselves?

"Some medical schools of the ambitious university type have, I am convinced, reached the height of pedagogic absurdity in their endeavor to elevate the standard of medical education.

"To discover and to teach are distinct functions; they are almost distinct gifts and are not commonly united in the same person. While teaching involves external engagements, the natural home for experiment and speculation is retirement. Failure to appreciate the difference between the dissemination of knowledge and the advance of knowledge has given rise to much confusion of thought and a tremendous loss of time and energy.

"Is it not prostituting science to expect an eminent reasearch man to teach freshmen? Is it not wholly unjust to both? Again, why should medical men be taught by physicists who know nothing of the physics required in physiology and practical medicine, and by chemists whose interest does not lie in the problems of pathological and physiological chemistry? Were it not better that chemistry be taught by the physiological physicist, by medical men who have gone through the whole training and know the needs and aim of practical medicine? At the beginning of their career medical students become the sport of biologists, who use them as the flotsam and jetsam of their seas of learning and oceans of theories. 'Biology as taught by non-medical men must go.' Teachers of anatomy must not forget that surgery is the proof of anatomy. Minute descriptive anatomy should not be allowed to crowd out applied anatomy, to the ultimate embarrassment of the junior student who enters the operating-room or faces the course in operative surgery.

"We should weigh carefully the suggestion made by the world-renowned biologist, Jacques Loeb: that the prevailing mode of teaching

anatomy—i. e., from the morphological viewpoint—has an atrophying effect upon the student's scientific interest and should give way to the functional method of teaching.

"The ordinary student who is destined to become a general practitioner ought not to be required to spend time on the acquisition of knowledge which he will never use. The whole of his studies should have a distinct bearing on, and lead up to the knowledge of the human body and its control in disease. The whole medical college should not be compelled to spend a disproportionate amount of time and energy upon subjects which will be of real use to a very few only, whilst subjects of the greatest importance have to be neglected in proportion to the amount of time devoted to ultra scientific matters. The accessory sciences must of necessity be subordinated to the highest purpose in the education of the medical man—to make him fit for the exercise of his future duties.

"Were some medical faculties to pause and remember the immortal words uttered two thousand years ago by the Father of Medicine, 'Art is long, time is short and technique is difficult,' they would abandon the rôle of precedent worshipers, extend the medical rather than the pre-medical curriculum, cease developing the student's memorial powers, stop training parrots, get rid of 'antiquated dictionary stuff,' abolish the monastic system of examinations, and thus eliminate the large element of lottery, lead the student to the bedside at a much earlier date, devote three-quarters of the curriculum to clinical work, make the teacher responsible for the student, restore the old-time close relation between the teacher and the student, and thus contribute to the primary aim of education—the formation of character and intellect. * * *"

Abstracts, Extracts and Miscellany.

Department of Internal Medicine.

In Charge of DR. E. M. DUPAQUIER, New Orleans.

NOTES ON PREVENTIVE MEDICINE.—Dr. Howard D. King's paper, read before the Orleans Parish Medical Society at its meeting on September 25, 1911, showing how much our port may become exposed to plague infection from infected areas on the Pacific Coast of South America, once the Panama Canal is opened, and the discussion of the paper by Dr. Creighton Wellman, of Tulane University, and Dr. Sidney Porter, chief sanitary inspector of the Louisiana State Board of Health, brought home some valuable data.

Dr. Wellman said that we are menaced as well by land, from our own Pacific Coast, for example, across the continent.

Like Drs. McCoy and Blue of the Public Health and Marine Hospital Service (see the *Journal of the A. M. A.*, Oct. 14, 1911), Dr. Wellman recalled the rôle which animals play in connection

with the spread of plague—*i. e.*, ground squirrels, tree squirrels, marmots, wild wood rats of Western, Middle and Southern States, as well as the domesticated rat, infecting each other; hence, epizootics among animals causing epidemics among men.

Dr. Porter, State Sanitarian, told us of his personal experience in educating the people, a mission full of hardships and drawbacks, from lack of the "weapons of war," the people being too poor (or too *indifferent?*) to co-operate.

At the Los Angeles meeting of the American Medical Association, last June, Dr. Elmer E. Heg, Seattle, Wash., one of the Committee on Preventive Medicine, in the discussion of the report, very properly said: "And when you can appeal to a merchant and show him that his loss in merchandise is greater through the rat than the cost of keeping them out, he becomes a sanitary agent; but you have got to show him that there is money in it." * * * And further: "Only those who are interested in public health are willing to do anything unless there is a dollar in it; but the eradication of rats and of ground squirrels also, is certainly a commercial proposition, just as well as a sanitary proposition."

A bon entendeur salut! (A word to the wise is sufficient.)

As costly as preventive medicine appears to be, or, rather, actually is, the public must know that it pays to invest treasure in it. What a waste of money in unnecessary, unhygienic routines of life on the part of the individual and State that could be used for education in health problems!

Education is always costly, and it is a waste of time to *ever* depend only on the benevolence of the great minority for maintaining any special education.

We want a good tax—a special tax—one that should be sacred like that of the public schools, out of the reach of the false, I beg your pardon, the political utilitarian. That tax, though small, the obolus of the people, would make hundreds of thousands, say, to solve health problems.

But the public may wince from the pain it gives to see the doctors cut their own throats. How humane! Let those who need consolation rest assured that their own failings shall keep the doctors quite busy yet.

All that is asked of the public is to pay the tax cheerfully and of some of the public, in addition, not to entertain ideas just as

stupid as those of that mob in Italy who recently assaulted doctors and nurses, and burnt isolation hospitals to the ground, clamoring the cholera patients were being poisoned to stay the spread of the disease.

We have had somewhat of that "opposition" here, only in words, luckily, during our yellow-fever experiences.

Why, there are still lingering among us some good souls from the *limbus patrum*, and some worthless souls from the *limbus fatuorum* (fool's paradise), who object to vaccination against small pox.

Moreover, the writer has yet to vaccinate his first case against typhoid fever, though he has begged to do it as hard as a man can beg.

But there is a small beginning in the record of a man's work. At least the writer prides himself of having been called Dr. Soap, in tenements where his name was too hard to catch.

Indeed, the co-operation of every practitioner is needed to scatter light among the masses, to wake them up from indifference, to smite their gibes with a gentle finger pointing out the danger, until the strong hand is brought about to play the tune of compulsion and enforcement.

"It is a consummation
Devoutly to be wished."

E. M. D.

Department of Obstetrics and Gynecology.

In Charge of DR. P. MICHINARD and DR. C. J. MILLER, New Orleans.

TUBERCULOSIS AND PREGNANCY.—Schauta thinks it is impossible to estimate beforehand whether tuberculosis is going to flare up under the influence of the pregnancy or not, as this is liable even in the mildest cases. The record shows aggravation in 75 per cent. and a fatal outcome in 50 per cent. of all cases. Even sanatorium treatment is generally unable to ward off or modify the aggravation of the disease. Allowing the pregnancy to progress to its latter half, and then interrupting it, is particularly disastrous to the mother, but might be indicated in exceptional cases to obtain a living child, the mother being beyond hope. The logical

conclusion from the evidence presented is, he thinks, that early abortion should be the routine procedure when a woman with certain tuberculosis of the lungs or larynx becomes pregnant. He prefers vaginal Cesarean section to the use of tents, which is more than liable to be followed by an ascending catarrhal affection of the tubes with suppuration. The anterior colpohysterotomy avoids this, and he supplements this by ligating the tubes, without pulling down the uterus, merely seizing the round ligament close to the uterus and ligating the tube twice, then drawing the round ligament up and suturing it over the uterine stump. It is unnecessary to bury the other stump. The technic is simple and permits restitution of the permeability of the tube if the tuberculous process should heal and the woman longs for a child. The resected tube or the ovary might possibly be implanted in the uterus wall. The other technics that have been suggested for temporary or permanent sterilization require laparotomy.—*Jour. A. M. A.*—MILLER.

ALLOWING PARTURIENTS TO GET UP ON THE FOURTH DAY.—Pruska concludes from the experiences at the third obstetric clinic at Prague that the morbidity of the lying-in period is materially reduced when the patients are allowed to leave the bed by the fourth day after delivery; the involution of the uterus proceeds fully as well, retroflexion is much less rarely observed, and the general health is materially influenced, he thinks, for the better. Only those are allowed to get up so early who have not required suturing, who feel well, and whose pulse and temperature have been persistently normal. He compares a group of 1,000 patients who are allowed to get up on the fourth day, with an equal number who were not allowed up till the ninth day, but who might have got up on the fourth day, according to the present rule. In the first group only 5.8 per cent. developed fever after the fourth day, while it was observed in 10.5 per cent. of the second group.—*Ibid.*—MILLER.

Department of Nervous and Mental Diseases.

In Charge of DRs. P. E. ARCHINARD and R. M. VAN WART, New Orleans.

HUGHLINGS JACKSON.—The death of Dr. Hughlings Jackson on October 7 recalls the great value of his work in the field of neurology. Commencing his investigations at a time when little was known—and that a series of disconnected fragments—he brought order out of its chaotic state. For years a physician to the National Hospital for the paralyzed and epileptic, he was able to utilize the newest methods of that hospital in the advancement of our knowledge of nervous diseases. He is best known by the study of convulsions and by the form of epilepsy which bears his name. He was a member of many learned societies and occupied a position of the first rank among living neurologists. He was an observer of facts, and was constantly on the look out for any likely to bear on the subject of his investigation. The assertion of self was absolutely unknown in his work, and he was always willing to explain away the differences of opinion of others and ignore them entirely. During the last years of his life he retired from active practice and withdrew from actual participation in scientific and social life. He was the author of many medical papers, and during his life conducted many elaborate and important researches. He was looked upon as the father of English neurology. Practically all those of the present day in some way or other felt the influence of his teachings.—VAN W.

NOTE ON TWO CASES OF TUMOR OF THE PREFRONTAL LOBE IN CRIMINALS.—Sullivan (*Lancet*, October 7, 1911) records two cases of tumor of the prefrontal lobe in which the first symptoms were disturbances in conduct which led to the imprisonment of the patients. The first, a man of 40, who, up to the time of his conviction, had borne an excellent character for honesty. He then commenced to steal and was several times imprisoned as a result. Physical examination after the imprisonment showed on his complaining of trouble with vision, the double optic neuritis. Examination was otherwise negative, and he was found dead in bed two days later. Autopsy showed a large tumor in the left frontal lobe. The second was a case of a man 57 years of age, who, during eleven months, was imprisoned five times for vagrancy and once

for drunkenness. He died suddenly without serving the last sentence. During the last imprisonment it was noticed that he was rather inert and apathetic, but there was nothing else of note. Some days later he was found in a semi-conscious condition, rigidity of the right arm and right side of the face. He became restless, the pupils were unequal and the pulse gradually ceased. The autopsy showed a tumor infiltrating the anterior part of the right frontal lobe. Cases of this kind are very unusual, but no doubt occasionally occur, and it becomes extremely important, where sudden changes of conduct are evidenced, that the patient be examined from a neurological standpoint. It should not be forgotten that crimes are frequently an early symptom to dementia paralytica.—VAN W.

THE ROLE OF HEREDITY AND OTHER FACTORS IN THE PRODUCTION OF TRAUMATIC EPILEPSY.—Munson (*Epilepsia*, Vol. 2, No. 4) concludes that in a considerable number of epileptics, in which trauma is the assigned cause, there are other factors present which may have had a bearing on the development of the disease, and the immediate thing to be recognized from this is that, before making the diagnosis of traumatic epilepsy, every possible etiological factor must be carefully weighed as to its value in the particular case. The importance of such a careful examination cannot be overestimated, since, in traumatic epilepsy, the question of operative interference almost invariably arises. It is easy to see that, in cases where heredity or other factors are all-important, operation could do little or no good; while in cases where the heredity is clean and where post-natal influences are lacking, and where the accident is apparently of sufficient severity, and has occurred within a reasonable period before the onset of epilepsy, surgical methods may have the greatest value.—VAN W.

THE CEREBROSPINAL FLUID IN SYPHILIS WITHOUT NERVOUS SYMPTOMS.—Boas and Lind (*Zeitschrift für die gesamte Neurologie u. Psychiatrie: Bd. IV., Heft 3, 1911*) find, after examining 12 cases, that while the Wassermann reaction was invariably positive in the blood, it was absent in the cerebrospinal fluid. The cells were increased in 4 cases, and the Nonne Apelt Phase I was present in 5 cases, but the grade of the reaction was positive in one only. They conclude that the presence of the Wasserman reaction in the cerebrospinal fluid has therefore a distinct value in the diagnosis of syphilis of the nervous system.—VAN W.

Department of Ear, Nose and Throat.

In Charge of DRS. A. W. DEROALDES and CLYDE LYNCH, New Orleans.

REGIONAL ANESTHESIA OF THE SUPERIOR MAXILLARY NERVE.—Dr. G. Boril (*Revue Hebdomadaire de Laryngologie et de Rhinologie*, No. 35, Sept., 1911) reviews the work that has been done along this line to the present time. He aims especially to secure perfect anesthesia of the antrum of Highmore in order to perform the Caldwell-Luc operation.

Dr. Gordon King, our late colleague, was one of the first to do a Caldwell-Luc under local anesthesia, securing anesthesia by anesthetizing the terminal nerve filaments. Dr. Garrot strove to secure the same results by intra-bony injection of an anesthetic mixture.

The sensory innervation of the antrum comes entirely from the superior maxillary nerve and branches of Meckel's ganglion. He describes the anterior dental branch of the superior maxillary nerve, carefully tracing its course, and asserts that it not only supplies the incisors and canine teeth, but sends filaments to the anterior and naso-antral walls, in the latter case, especially to that region in relation to the inferior meatus.

Discussing the various methods to reach the nerve trunk, he condemns, first, the sub-zygomatic; second, the anterior orbital routes, for various reasons, and reaches the trunk by the buccal route through the posterior palatine canal; considering this the safest, simplest and most accurate.

The technic is as follows: The mouth is cleansed with an antiseptic wash; the site of puncture cocainized locally and touched with iodine. The naso-palatine canal is situated at the base of the third molar tooth, and its direction is slightly oblique with the mouth wide open. A platinum needle, 5 c.m. long, is driven into the gums at a point 4 c.m. inside the second molar tooth with the syringe lying on the lower lip.

At a depth of 1 c. m. the needle enters the canal, and advancing the anesthesia mixture ahead of the needle it is inserted to a depth of $4\frac{1}{2}$ c. m., at which point 3 c. c. of the following solution are injected:

Cocain hydrochlorate	5 ctgms.
Novocain	10 ctgms.
Sol. adrenalin chlorid (1-1000)	20 gtts.
Normal saline	10 c.c.

Within twenty minutes anesthesia is complete, when the buccal mucous membrane may be cocainized locally and the operation may be started.

The author reports having operated on one case with perfect anesthesia, the patient complaining only of some stinging after the cavity was swabbed with zinc chloride, and this 45 minutes after the induction of anesthesia.

Charity Hospital Bulletin.

In Charge of DR. J. A. DANNA, House Surgeon.

STRANGULATED INGUINAL HERNIA WITH RESECTION OF SIX INCHES OF GANGRENOUS BOWEL.—This patient, a colored woman, aged fifty-five years, is one of the many cases admitted to the emergency service of the Hospital for immediate attention, and with which we have to so frequently deal.

Patient admitted on the evening of August 12, 1911, suffering with severe abdominal pain and in a condition of profound shock and exhaustion. She was very restless, tossing from side to side, in spite of opiates, which had been given prior to admission. Surface of body, cold and covered with perspiration; pulse rapid and of small volume; respiration rapid, and somewhat labored; abdomen very much distended, tympanitic and painful on palpation; temperature, 101° F.

Family history had no bearing on present illness. Previous history revealed the fact that she had had a reducible inguinal hernia of long standing. Patient had been perfectly well up to forty-eight hours prior to admission, when she was seized with abdominal pain, associated with a swelling in the left inguinal region, and, the pain growing progressively worse, a physician had to be summoned to alleviate her suffering. Patient claims she was given at this time an opiate, which relieved her to some extent. Purgative enemas were given, and returned clear, with no evidence of fecal matter or expulsion of flatus. After repeated efforts to get bowel movement by enema with no result, patient was told that an operation would be necessary, and advised to come immediately to the Hospital. She, however, did not appre-

ciate the gravity of her condition, and delayed her departure for the Hospital, to her own detriment. For twenty-four hours prior to admission she had been vomiting frequently a greenish fluid in large amounts, and when she arrived at the Hospital the vomitus was distinctly fecal in character.

Physical Examination: Colored female, moderately well nourished; heart and lungs normal; abdomen distended and tympanitic. There was present a localized swelling in the left inguinal region, the tenseness of which was well marked, and sensitive on palpation. It was very evident that the once reducible hernia had now assumed a condition which was strangulated and irreducible. No attempt to reduce hernia was made, for fear some injury might accompany any efforts at reduction of a condition so long strangulated.

Patient was immediately prepared for operation, and, under ether anesthesia, an incision about three inches in length was made, beginning a little below the anterior superior spine and about one-half inch above and parallel with Poupart's ligament, and ending over about the middle of the external abdominal ring. The aponeurosis of the external oblique was then incised, relieving the constriction at the external ring. The sac, which was found firmly adherent to surrounding structures, was separated with no little difficulty. The congestion and exudation in and around the imprisoned bowel made the tumor very tense. The overlying and surrounding tissues were edematous and infiltrated, and, as a consequence of such a long period of strangulation, the bowel was thoroughly gangrenous and the adjacent tissues beginning to slough, due to pressure, plus the action of the bacterial toxins, which are almost always present in such cases.

The sac contained quite a quantity of a sero-sanguineous fluid and about four inches of small intestine. The constriction in this case was due to a tight external ring encircling a loop of the ileum, which was of a black or grayish color; surface granular, and its usual smooth, glossy appearance lost. All signs of viability being absent, prompt resection was performed in the following manner:

After the contents of that part of bowel to be resected had been removed by "milking" the intestine in opposite directions from the center of the part to be excised, long intestinal forceps were

applied to the intestine, at the point selected for transection, which compressed the entire intestine and at such an angle as to be sure of a good blood-supply to the remaining proximal and distal free edges of the intestine. Two other forceps were now placed parallel and as close as possible to the first ones. The segment of bowel, about six inches in length, to be removed, was excised by dividing the gut between the clamps with a knife, being careful to protect the field of operation from any possible contamination. The vessels along the line of division of the mesentery were ligated, and the excised portion of bowel severed close to and along the mesenteric attachment. The proximal and distal free ends of intestines were closed with a continuous suture of fine silk, and this line of suturing invaginated by continuous Lemberts of same material.

A lateral or side-to-side anastomosis by means of the Murphy button was done in the usual manner. The site of approximation and adjacent area were sponged off with saline solution, dried, and bowel returned to the abdomen. A purse-string suture of catgut was placed at the base of the sac. A cigarette drain was inserted and purse-string pulled tightly and knotted. No attempt at herniotomy was made, on account of the sloughing condition of tissues. The external fascia and skin in the upper and lower angles of wound were approximated, however, with tier sutures, and iodoform gauze packed in and around wound. A loose, fluffy dressing applied and patient returned to ward, and, after reaction, placed in Fowler's position and continuous saline solution given by Murphy drip. Stimulation was given freely for a few days following operation. All abdominal pain ceased, and patient rested quietly. In addition to Murphy drip, saline was given by hypodermoclysis every eight hours for thirty-six hours following operation with telling effect. Patient reacted nicely, and was allowed crushed ice and Ducro the next day, and liquids rather freely thereafter. No vomiting of any consequence after operation. A low purgative enema was given twenty-four hours later, with good results, and repeated when necessary, but no purgative was given until the tenth day after operation, when a half ounce of castor oil was administered with excellent result.

Frequent changing of dressing was required, due to the foul discharge always present from such a sloughing wound. Discharge

gradually diminished, however, and on the fourteenth day drainage was no longer necessary, and wound was allowed to heal by granulation, which fact necessarily caused her recovery to be somewhat prolonged. She was allowed to get up thirty-six days after operation. She, at this time, had never passed Murphy button, but was cautioned to keep close watch for same, but, due to her ignorance, she became derelict in her watchfulness, and button evidently expelled without detection. Two skiagraphs were taken with hope of locating the button, but each time the radiologist reported negative finding.

She was discharged as cured on October 13, 1911, and when last heard from, a few days ago, was enjoying perfect health.

At time of first operation my intention was to do a secondary operation for the hernia at some future time, when the condition of the wound justified such procedure. It was surprising, however, to see how perfectly the wound had closed by granulation, leaving a firm and substantial abdominal wall, with only a small scar, and only then did I realize that nature, in all her glory, had robbed me of the second operation, to the gratification of both myself and patient.

C. G. COLE, M. D.,

Second Assistant House Surgeon.

Medical News Items.

MEETING OF LOUISIANA STATE BOARD OF MEDICAL EXAMINERS.—The Louisiana State Board of Medical Examiners held its annual meeting October 18-21. The officers elected for the ensuing year are: Dr. J. G. Martin, Lake Charles, president; Dr. S. L. White, Ruston, vice-president; Dr. A. B. Brown, New Orleans, secretary-treasurer. Twenty applicants out of thirty-six passed the examination, as follows: Frank Jackson Spellman, Alexandria, La.; Houston C. Chambers, Girard, La.; F. G. Ellis, Willis P. Butler, Shirley H. Betts, Shreveport, La.; W. B. Boring, Zwolle, La.; C. E. Spivey, Carson, La.; John Monroe Johnson, W. W. Welch, Hico, La.; John D. Frazar, DeRidder, La.; Governor McClanahan, Etta Pearl McCormick, O. W. Landry, New Orleans, La.; C. C. Hightower, Hattiesburg, Miss.; Prince O. Wailes, Al-

giers, La.; N. W. Carter, Robeline, La.; Webster B. McPherson, Letohatchee, Ala.; Edward E. Jordan, Robeline, La.; Marvin Chappel, Gurdon Buck, Evergreen, La.

HARRISON COUNTY MEDICAL ASSOCIATION held its monthly meeting at Gulfport, Miss., November 7. The question of medical legislation was discussed and a motion to adopt resolutions, as introduced by Dr. H. M. Folkes, in regard to this subject, was passed. The Society adjourned to meet again on the second Tuesday in December.

TRI-STATE MEDICAL SOCIETY MEETING.—The Eighth Annual Meeting of the Tri-State Medical Society of Arkansas, Louisiana and Texas was held at Texarkana, Nov. 14 and 15, 1911. On account of the fact that the Northeast Texas Medical Society met on the same dates, a joint meeting was held, on the first day of which Dr. W. J. Matthews, Naples, Texas, president of the Northeast Texas Medical Society, and on the second day Dr. Thos. P. Lloyd, of Shreveport, La., president of the Tri-State Medical Society, presided. The attendance and program were both up to the standard. The following officers were elected: President, Dr. E. H. Martin, Hot Springs, Ark.; vice-presidents, Dr. F. T. Kittrell, Texarkana, Ark.; Dr. J. F. Rosborough, Marshall, Texas; Dr. J. E. Knighton, Shreveport, La.; secretary-treasurer, Dr. J. M. Bodenheimer, Shreveport, La. Shreveport was selected as the next meeting place.

LECTURES FOR THE LOUISIANA STATE NURSES' ASSOCIATION.—Beginning December 16, the Louisiana State Nurses Association will arrange for a lecture every two weeks at the Touro Infirmary.

HOSPITAL ROOM ADDED TO PUBLIC SCHOOL.—The new public school building in Dryades street, which was named the Robert Davey, has a hospital room. This is the first one in the city.

THE RED CROSS CHRISTMAS SEALS have been ordered, and fifty million will be printed. The new design is a winter scene, and will not resemble a postage stamp, as in the past.

COLLEGES CONSOLIDATE.—The Barnes Medical College of St. Louis has been consolidated with the American Medical College.

PHYSICIAN CONVICTED AND SENTENCED.—Dr. J. W. Decker, who ran a diploma mill at Texarkana, and later at Dallas, was

convicted of fraudulent use of the mails, and is now serving a fifteen months' sentence in the penitentiary at Leavenworth, Kansas.

YELLOW FEVER FIGHTER HONORED.—Dr. Carlos Finlay, of Havana, distinguished for his work in the study of yellow fever in Cuba, was elected a corresponding member of the French Academy of Medicine.

TRANSMISSION OF DISEASES BY MEANS OF BOOKS.—Mr. Wm. R. Reinick, chief of the Free Library of Philadelphia, who is engaged in collecting data to be used at the next "International Congress of Hygiene," requests our readers to send him an account of any cases of diseases which have been traced to books or papers; also, information as to any illness or death caused by poisons used in book-making. Mr. Reinick can be addressed at No. 1709 Wallace street, Philadelphia, Pa.

THE SOUTHERN MEDICAL ASSOCIATION MEETING.—The fifth annual session of this body was held in Hattiesburg, Miss., with the largest attendance in the history of the Association, over 300 members being registered.

The program was excellent in each of the sections, and the time occupied by full discussions. New Orleans was represented by a considerable delegation—Drs. Parham, Martin (E. D.), Hume, Elliott (J. B., Jr.), Guthrie, Feingold, Dupuy, DeBuys, Dowling, Gessner, Maes, Bass, Porter, Menage, Newhauser, Cohn and Dyer.

The physicians and citizens of Hattiesburg had every arrangement ready for a successful meeting, and the social features were simple and enjoyable.

Symposiums on Pellagra and Syphilis were listed, but the latter could not be reached on account of a crowded program. Jacksonville, Fla., was selected as the next meeting place, and the following officers were elected:

President, Dr. J. M. Jackson, Miami, Fla.; first vice-president, Dr. Frank A. Jones, Memphis, Tenn.; second vice-president, Dr. Daniel J. Williams, Ellisville, Miss.; secretary, Dr. Seale Harris, Mobile, Ala.

Officers of Sections: Medical Section—Dr. C. C. Bass, chairman, New Orleans; Dr. G. E. Henson, vice-chairman, Crescent City, Fla.; Dr. H. H. Mitchell, secretary, Birmingham, Ala. Sec-

tion on Surgery—Dr. T. H. Inge, chairman, Mobile, Ala.; Dr. W. A. Bryan, vice-chairman, Nashville, Tenn.; Dr. Hermann D. Gessner, secretary, New Orleans. Section on Eye, Ear, Nose and Throat—Dr. M. Feingold, chairman, New Orleans; Dr. U. S. Bird, vice-chairman, Tampa, Fla.; Dr. Homer Dupuy, secretary, New Orleans; Section on Hygiene and Preventive Medicine—Dr. Oscar Dowling, chairman, New Orleans; Dr. J. Y. Porter, vice-chairman, Key West, Fla.; Dr. A. W. Freeman, secretary, Richmond, Va.

Important recommendations made at this meeting were resolutions urging rat-extermination in Southern cities as a precaution against the plague, and for a commission to study malaria in the South.

PUBLICATIONS OF LOUISIANA HEALTH BOARD.—The JOURNAL is in receipt of the Bulletin of the State Board to Schools, and also of the Sanitary Code. Both indicate the busy forward movement of our State officials in this department.

INFANT MORTALITY.—The second annual meeting of the American Association for the Study and Prevention of Infant Mortality was held in Chicago, November 16 to 18, at the LaSalle Hotel.

THE AMERICAN PUBLIC HEALTH ASSOCIATION.—This Association meets in Havana, December 5 to 9. The headquarters will be the Hotel Sevilla. Several sections have been planned, and an excellent meeting is anticipated. Intending members and visitors are advised that Havana may be reached from Tampa, Knight's Key, New York and New Orleans. A number of social features are announced.

PERSONAL.—We note with regret, from the United States Public Health and Marine Hospital Service Bulletin, that our esteemed friend and former citizen, Dr. H. R. Carter, has been granted leave of absence from September 14 for one month, and again from October 14 for one month, on account of illness. We trust that by this time he has fully recovered and resumed the duties from which he can ill be spared.

Dr. Marion Souchon has recently been elected to the responsible post of medical director of the Pan-American Life Insurance Company.

The JOURNAL is pleased to announce that Dr. J. A. Storek has resumed practice, after a long illness.

REMOVALS.—Dr. S. M. Elhert, from Fowler, Cal., to Springfield, La.

Dr. Gally Wogan, from Lafourche Crossing to New Orleans.

Dr. Robert J. Miller has removed from St. Louis to San Antonio, Texas.

MARRIED.—On November 8, 1911, Dr. John Smyth to Miss Jean Sully, both of this city.

On November 8, 1911, Dr. Roy DeLisle Wilson to Miss Nell Kittrell McGarry, at Houston, Texas.

On October 26, 1911, Dr. John Alexander Hendrick to Miss Louise May Smith, both of Shreveport, La.

On November 21, 1911, Dr. B. Lavigne to Miss Aurelia Dupre, both of Point-a-la-Hache, La.

DIED.—In London, November 8, 1911, Dr. John Hughlings Jackson. Dr. Jackson was best known for his work on epilepsy, although as a neurologist he was of world-wide reputation.

On November 10, 1911, Dr. Joseph Waldauer, of Vicksburg, Miss., aged 48 years. Dr. Waldauer was a physician of prominence and a well-known fever expert.

On October 23, 1911, Dr. G. C. Mouton, of Rayne, La.

On November 3, 1911, Dr. S. B. Hornsby, of Natchez, Miss., aged 78 years.

On October 24, 1911, Dr. W. H. Wilkerson, of Marion, Ala., aged 53 years.

On November 21, 1911, at Washington, D. C., Dr. Walter Wyman, Surgeon-General of the United States Public Health and Marine Hospital Service.

On November 20, 1911, at Prairieville, La., Dr. Benjamin Bunch Singletary, aged 74 years. Dr. Singletary was a prominent physician of Livingstone Parish and served with honor and gallantry in the Confederate Army.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of respective publications. The acceptance of a book implies no obligation to review.

Nostrums and Quackery. Based on articles on the Nostrum Evil and Quackery in *The Journal of the American Medical Association*, with additions. American Medical Association, Chicago.

All physicians whose patients ask for information regarding the efficacy of certain "patent medicines," or other quack treatments, and laymen who desire information on the same subjects, will find this a valuable volume.

The articles do not deal with generalities: they are to the point. The investigations have been made with thoroughness and the statements are authoritative, for the Association could not afford to speak as plainly as it does if it were not sure of the facts. In many instances chemical analyses, made in the Association laboratory, are given.

The volume is published to enlighten the public regarding fakes and fakers. It would be well for every physician to see that his patients become acquainted with this book. The Association is prepared to furnish it in quantities at a very low figure; it also supplies a copy intended for use in the reception room, with the physician's name printed thereon.

C. C.

Lippincott's New Medical Dictionary. Edited by HENRY W. CATTELL, A. M., M. D. J. B. Lippincott Company, Philadelphia and London.

An illustrated vocabulary of the terms used in medicine, dentistry, the veterinary and the allied sciences. It contains, in addition, much information of an encyclopedic nature.

This is the second edition, and its publication, within a year after the first, is ample attestation of the favor it has met at the hands of the student, the doctor and the others who need a medical dictionary.

It consists of more than 1,100 pages, without being bulky; has the thumb index, and is bound in flexible leather covers.

Both attractive and convenient, it will doubtless meet with as good a reception as the first edition.

C. C.

The Medical Record Visiting List. Wm. Wood & Co., New York, 1912.

For the coming year this regular visitor has been revised so as to increase the amount of matter apt to be useful in emergencies, while lessening that which the physician can best get from his library. The principal improvement is in the list of remedies, their dosage and the indication of those official in our pharmacopeia. The usual visiting list, record blanks, and space for accounts form the main part of the booklet, which is attractive in appearance and useful in practice.

The Practitioner's Visiting List for 1912. Lea & Febiger, Philadelphia.

A valuable book, containing data important for every physician, and ruled blanks for recording details of practice. The Weekly, Monthly and 30-Patient Perpetual contain 32 pages of data and 160 pages of classified blanks. The 60-Patient Perpetual consists of 256 pages of blanks alone. Each one in wallet shaped book, suitable for the pocket, bound in flexible leather, with flap and pocket, pencil with rubber, and calendar for two years; may be had with thumb-letter index. Every physician needs a visiting list, and this one may be recommended as one of the best.

Publications Received.

P. BLAKISTON'S SON & CO., Philadelphia, 1911.

Manual of Pathology, by W. M. Late Coplin, M. D. Fifth edition, revised and enlarged.

W. B. SAUNDERS CO., Philadelphia and London, 1911.

A Text-Book of Physiology, by Wm. H. Howell, Ph. D., M. D., Sc. D., LL.D. Fourth edition, thoroughly revised.

Pathological Technique, by Frank Burr Mallory, A. M., M. D., and James Homer Wright, A. M., M. D., S. D. Fifth edition, revised and enlarged.

The American Illustrated Medical Dictionary, by W. A. Newman Dorland, A. M., M. D. Sixth edition, revised and enlarged.

Collected Papers by the Staff of the St. Mary's Hospital Mayo Clinic, Rochester, Minn., 1910.

The Treatment of Fractures, by Charles Locke Scudder, M. D. Seventh edition, thoroughly revised and enlarged.

A Text-Book of the Practice of Medicine, by James M. Anders, M. D., Ph. D., LL.D. Tenth edition, thoroughly revised.

J. B. LIPPINCOTT CO., Philadelphia and London, 1911.

New Medical Dictionary, by Henry W. Cattell, A. M., M. D. Second edition.

The Parasitic Amœbæ of Man, by Charles F. Craig, M. D.

D. APPLETON & CO., New York and London, 1911.

Food Values, by Edwin A. Locke, A. M., M. D.

WM. WOOD & CO., New York, 1911.

Diseases of the Stomach, by Max Einhorn, M. D. Fifth edition.

Diseases of Infants and Children, by Henry Dwight Chapin, A. M., M. D., and Godfrey Roger Pisek, M. D. Second revised edition.

Orthopedic Surgery, by Edward H. Bradford, M. D., and Robert W. Lovett, M. D.

Text-Book of Pathology, by Francis Delafield, M. D., LL.D., and T. Mitchell Prudden, M. D., LL.D. Ninth edition.

Text-Book of Embryology, by Frederick Randolph Bailey, A. M., M. D., and Andrew Marion Miller, A. M. Second edition.

LEA & FEBIGER, Philadelphia and New York, 1911.

Electricity, by Charles S. Potts, M. D.

G. P. PUTNAM'S SONS, New York and London, 1911.

The Way With the Nerves, by Joseph Collins, M. D.

The Origin of Life, by H. Charlton Bastian, M. D., F. R. S.

W. M. LEONARD, Boston, 1911.

Case Histories in Neurology, by E. W. Taylor, A. M., M. D.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans
FOR OCTOBER, 1911.

CAUSE.	White.	Colored.	Total.
Typhoid Fever.....	5	5	10
Intermittent Fever (Malarial Cachexia)	5	2	7
Smallpox.....			
Measles.....			
Scarlet Fever.....			
Whooping Cough.....	4		4
Diphtheria and Croup.....	2	1	3
Influenza.....	3	2	5
Cholera Nostras.....			
Pyemia and Septicemia.....	1	2	3
Tuberculosis.....	37	41	78
Cancer.....	25	2	27
Rheumatism and Gout.....	1	2	3
Diabetes.....	4	1	5
Alcoholism.....	1		1
Encephalitis and Meningitis.....	3	1	4
Locomotor Ataxia.....	1		1
Congestion, Hemorrhage and Softening of Brain.....	15	10	25
Paralysis.....	1	1	2
Convulsions of Infants.....		4	4
Other Diseases of Infancy.....	11	12	23
Tetanus.....	5	2	7
Other Nervous Diseases.....	1	1	2
Heart Diseases.....	45	40	85
Bronchitis.....	4	1	5
Pneumonia and Broncho-Pneumonia.....	22	15	37
Other Respiratory Diseases.....	1	1	2
Ulcer of Stomach.....	1		1
Other Diseases of the Stomach.....	3	3	6
Diarrhea, Dysentery and Enteritis.....	33	12	45
Hernia, Intestinal Obstruction.....	5		5
Cirrhosis of Liver.....	9	5	14
Other Diseases of the Liver.....	1	1	2
Simple Peritonitis.....	1		1
Appendicitis.....	4	1	5
Bright's Disease.....	30	24	54
Other Genito-Urinary Diseases.....	3	2	5
Puerperal Diseases.....	9	3	12
Senile Debility.....	3	1	4
Suicide.....	3		3
Injuries.....	19	16	35
All Other Causes.....	28	10	38
TOTAL.....	349	224	573

Still-born Children—White, 25, colored, 28; total, 53.

Population of City (estimated)—White, 272,000; colored, 101,000, total, 373,000.

Death Rate per 1000 per annum for Month—White, 15.39; colored, 26.51; total, 18.43.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure..... 30.04
Mean temperature..... 74.00
Total precipitation..... 1.99 inches.
Prevailing direction of wind north.

New Orleans Medical and Surgical Journal.

VOL. LXIV.

JANUARY, 1912.

No. 7

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

The Treatment of Hypospadias.*

By F. W. PARHAM, M. D., New Orleans, La.

It is not my purpose to-night to go into an exhaustive discussion of the treatment of this sometimes most distressing deformity. At the Atlanta meeting of the Southern Surgical and Gynecological Association in 1900 I read a paper on this subject, afterwards somewhat elaborated and published in the January, 1901, issue of the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL. In this paper I collected everything at that time available in the literature, and about the same time (*Journal American Med. Association*, April, 1901) my friend, Dr. Chas. Mayo, of Rochester, Minn., published quite independently of me a very comprehensive article on the same subject. Both the paper of Mayo and mine are well illustrated with cuts of the various procedures, and I beg to refer those desirous of more detailed information concerning the development of the more modern treatment of this deformity

* Read before the Orleans Parish Medical Society, November 13, 1911.

to these papers. I shall at the present confine myself to a discussion of certain general principles and of a few procedures well calculated by their simplicity of technic to assure success. After a not inconsiderable experience extending over many years, beginning with the old Duplay operation and ending recently with the most modern technic, I feel that I am in a position to make certain suggestions that may prove of service to others in endeavoring to avoid the embarrassment and mortification to which I have myself been subjected.

The direct formation of a urethra, whether in the glans or in the body of the organ, is tedious and very uncertain, and will almost always fail, and, when it does fail, subsequent plastic work is rendered much more difficult by the resulting cicatricial tissue. For the purely balanic forms the procedure of Beck may be tried with reasonable expectation of a good result. Beck has demonstrated that the urethra when dissected free is susceptible of a certain amount of extension; and, where there is not much curvature of the glans downward, it may be extended to the normal site of the meatus without increasing this curvature; but my experience leads me to advise against employing this method in any case where the abnormal urethral opening is further back than, say, a quarter inch behind the corona glandis. It must be borne in mind, as Lydston has pointed out, that in these cases we have not a redundancy of urethra, but a decided shortening. Although the urethra has a certain amount of extensibility, due to its elasticity, this very property, if too much abused, may substitute a functional disability even more unfortunate than the original deformity. The urethra so extended tends to act as a bowstring and pulls down the glans, producing incurvation. In the balanic forms the elastic recoil or cicatricial retraction may be successfully antagonized by proper suturing, but the bowing cannot be prevented if the urethra be too much stretched. What is needed really is an actual lengthening, a splicing, of the urethra, because it is already too short.

Another serious difficulty lies in the extreme thinness of the urethral tissue in some cases at and more or less back of the spadal orifice. In these inherent difficulties lies the defect of the Beck procedure, and these two difficulties are much intensified by the preliminary straightening required in many of these cases, especially conspicuous in those post-balanic forms of hypospadias.

Furthermore, the difficulty of securely anchoring at the meatus a urethra after carrying it through the tunneled glans, is considerable, particularly in those thin-walled urethras referred to, resulting in the retraction of the urethra and cicatricial contraction of the glandular canal. What is far worse, indeed most disastrous to the patient and embarrassing to the operator, is that more or less of this extended urethra may actually slough, as happened in my case, to be related shortly. There is then a long wait until this slough shall all have come away, and the new meatus is found a half inch, perhaps an inch, further back, and there is more or less cicatricial tissue in the line of the urethra. The problem of urethral reconstruction is now far more difficult of solution. I cannot better illustrate the difficulties that may tax a surgeon's patience than by the narration of a case under my care for the past seven months.

A young man, twenty-three years of age, consulted me last March for a post-balanic hypospadiac deformity with some curvature. I operated March 21, attempting the Beck extension procedure. After cutting the tissue bands causing the curvature I dissected up the urethra for perhaps two inches until it was well mobilized. In doing this I encountered considerable hemorrhage, quite a large artery being unavoidably cut. The glans was tunneled with a knife, the urethra pulled through and attached at the meatus, a catheter being passed from meatus to bladder and left in, no perineal opening having been made. All went well for a few days. When the dressing was removed, however, it was apparent that the urethra had sloughed for a large part of its freed extent. In a few weeks the raw surface was healed, leaving the meatus nearly midway between the corona and the peno-scrotal junction. Cicatricial tissue occupied the floor from the meatus to the corona, and tabs of cicatricial skin marked the site of the former urethra. On April 25 I dissected out as much of this cicatrix as was feasible, and, having reopened the glandular tunnel, I introduced from the tip of the glands to and into the urethra a Nové-Jossérand graft; that is, a Thiersch graft, taken from the thigh and wrapped around a No. 21 Fr. soft catheter. This catheter passed only a short way into the urethra, a perineal button hole having been made behind to prevent urine from passing forward. This catheter, with its graft about it, raw side out, being in place, the skin on each side having been somewhat undermined, was drawn to the

middle line and stitched over it. This also failed, much to my chagrin; not entirely, however, since when apposed skin separated I found the bottom well covered with adherent graft, which in some places, owing to its thinness, had succumbed, leaving a few ulcerating spots.

I am quite sure failure here was due to the thinness of the graft. I believe a Wolf whole-skin graft would have been more likely to survive. Undoubtedly erections during sleep had much to do with the result.

The patient still retaining confidence in me, one month later—that is, on May 23—I had opportunity to do another operation. On this occasion I resorted to Beck's second procedure, making a urethra by turning together two flaps of skin attached along the mid-line, this skin being mostly the grafted surface which had survived. This tube being formed, the old contracted glandular meatus was cut and the whole raw surface of this new urethral tube covered in by cutting a flap out of the scrotum and bringing it forward with a twist and securing it to the sides of the raw surfaces left by the turning in of the flaps which formed the urethra. (Figs. 4, 5, 6.) This also succeeded badly owing to sloughing, but the meatus was advanced about a half inch. Matters were now allowed to rest for seven weeks, the repeated disasters of the past leaving both patient and surgeon in a highly demoralized condition. I considered all the various procedures that might have possible application to the case. I had about decided to adopt Mayo's modification of Weller Van Hook's operation, which consists in cutting a flap about an inch wide out of the prepuce and having unfolded it, making a tube of it, raw surface out, and pushing it through a tunnel made through the glans and under the skin of the penile portion back to the abnormal meatus.† This is an excellent procedure in a suitable case, but I still hesitated to try this tube plan again in the face of my previous experience with sloughing, when I ran across in Cheyne and Burghard's Surgery a reference to Bucknall's procedure, to be found in the London *Lancet* for September, 1907.*

† See Mayo's article in *Journal American Medical Association*, April, 1901, and my paper, *NEW ORLEANS MEDICAL AND SURGICAL JOURNAL*, January, 1901.

* The same fear deterred me from resorting to the procedure of Rochet (Figs. 1, 2 and 3), or to that of Russell (*Annals of Surgery*).

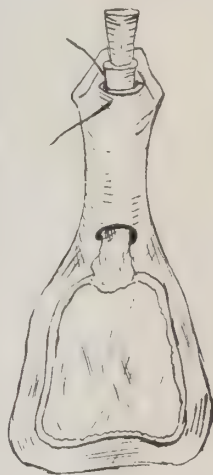
All these procedures are excellent, and may be tried under favoring conditions, but none of them is so likely to succeed as that described in this paper. The procedure of Russell, however, has one advantage—that it may be carried out in cases where the scrotal urethra also is lacking.



Rochet Fig 1



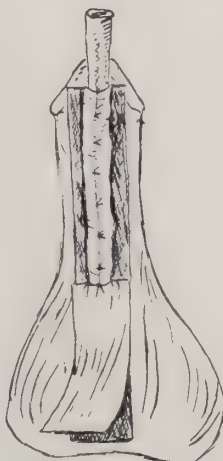
Rochet Fig 2



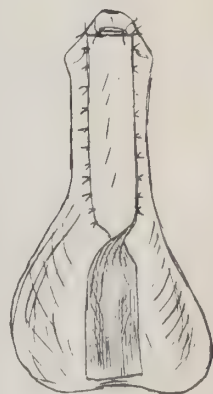
Rochet Fig 3



Beck Fig 4



Beck Fig 5



Beck Fig 6

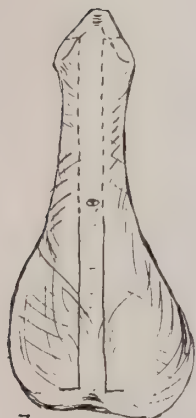


Fig. 7. Duck call

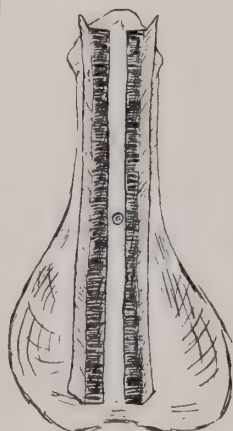


Fig. 8



Fig. 9



Fig. 10

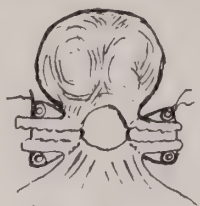


Fig. 11

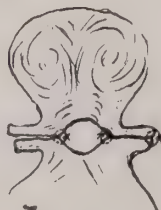


Fig. 13



Fig. 12

The first procedure was carried out on July 11, 1911, and the last on October 10, 1911.

By this means I have at last snatched success out of defeat. I will try with the aid of these diagrams, for which I am indebted to my associate, Dr. L. B. Crawford, to explain the technic of this admirable operation. It has application to all degrees of penile or peno-scrotal hypospadias; that is, to all cases where there is enough scrotum to furnish a long enough strip of skin. By means of this technic the whole canal is restored in its continuity at once, except the fashioning of a meatus. This can be done at a subsequent operation. (See Figs. 7, 8, 9, 10, 11 and 12.) Fig. 11 is a cross section, showing the method of suturing, according to Bucknall, intended to assure a broad apposition of surfaces. In my case I followed a different plan, which was suggested by Dr. Crawford, my assistant in the operation. This is shown in Fig. 13. In this procedure the urethra is formed by suturing with chromicized gut the inner edge, being careful to avoid, so far as possible, entering the new urethral tube. This does not seriously matter, however, as by the use of a catheter, or with a perineal opening, urine need not pass for several days along the canal. Having in this manner fashioned the urethra all the way to the meatus, the lateral raw surfaces are brought together so as to get as broad apposition as possible.

When this has been done the penis is fastened to the scrotum and can be so left indefinitely, although the separation may be safely made after three weeks. In my case it was not done until three months had elapsed. Beginning three weeks after the operation sounds were passed from time to time to overcome the tendency to cicatricial contraction at the new meatus. At the present writing No. 28F is easily passed all the way into the bladder. The meatus now delivers the urine in the shape of a knife blade. I hope to correct this by a later plastic operation. The relief of curvature is not all that could be desired, but the improvement over the original condition is decided, and, I believe, would have been entirely satisfactory but for the failure of two operations resulting in a large amount of cicatricial tissue.

Arteriosclerosis.*

By J. B. ELLIOTT, Jr., M. D., New Orleans, La.

Before taking up the cases upon which this paper is, in part, based, it is well for us to look into the etiology of arteriosclerosis. In the clinics of the Charity Hospital I should say hard work, with its accompanying high arterial tension, is undoubtedly the cause, above all others, of arteriosclerosis, and I partly agree with Cabot that alcohol does not play, by any means, the most prominent part in these cases. Syphilis, of course, is prevalent, especially in the colored race, but without the high tension from muscular exertion I hardly think it should take first place in the causation.

In blacksmiths, railroad workers and wood choppers we find this disease most prominent, even in very early life, due here entirely to the hypertension in the arteries with its secondary hypertrophy and fibrosis. In private work amongst the better class I should say that over-eating and mental worry are the factors in its causation. The over-eating causes, first, increased pressure by the mechanical excess of blood in the arteries, and, second, causes disease of the arterial coats, due to the fact that the organs of digestion cannot handle all the work given to them, and the excess of food aids in the formation of toxins, which toxins are carried to the middle coat of the arteries through the vasa vasorum, causing there hypertrophy and either fibrosis or fatty degeneration, and even true atheroma.

Mental anxiety and worry act much in the same way. The constant strain of mental work in the banker, the broker and professional man in modern life cause continued high pressure throughout the entire arterial system, especially in the cerebral arteries, and also a constant vaso-motor constriction in the capillaries, and this constant high pressure, plus vaso constriction, causes the arteries either to give way or to hypertrophy and fibrose.

A striking example of this latter condition came to my notice not long since in a cotton broker who applied to me for life insurance examination at the age of 43. He had passed a first-class examination in 1904. In 1909 he applied to me again to increase his insurance. On the second examination I found that

* Read before the Orleans Parish Medical Society, November 13, 1911.

the man's arteries had changed from those of a young to those of an old man. The blood pressure had risen from 130 to 200 in this short time. I then asked what had happened during the five years. I found that his life as regards food, drink and exercise had been in no wise changed, but that he had been through two or three panics in the market and accordingly had been under a tremendous nervous strain, this and this alone accounting for his rapid aging.

As regards the pathology of this disease, I wish that every man in this audience would read the work of Adami on the subject. In the preface to one of his articles he says:

"It is strange that we possess no adequate and comprehensive name for that morbid condition which is the most common amongst adults in civilized lands."

It has been my experience that physicians, as a rule, are too prone to overlook arteriosclerosis until it has arrived at the atheromatous stage, at which time prophylaxis and treatment are useless. In the vast majority of cases weakness and giving way of the media is the primary lesion in arteriosclerosis, though macroscopically hypertrophy of the intima is the primary lesion. The giving way of the media is due either to primary degeneration, without any signs of preceding inflammation, or maybe of inflammatory origin, as is so well exemplified in the endarteritis of syphilis.

When the word "arteriosclerosis" is used I would, therefore, have you picture a condition of general fibrosis of all the capillaries and arteries throughout the body, though, of course, we know from post-mortem results that we may, and frequently do, have this fibrosis present only in certain arteries and capillaries, while other arteries are in a fairly good state of preservation.

Let us now see what symptoms should and do present themselves in beginning arteriosclerosis. Gubb (A. S.) has written a very excellent article on the premonitory symptoms of arteriosclerosis, and my experience agrees largely with his views. These patients first complain of great fatigue before any other symptoms or signs of palpable arteriosclerosis appear. Along with this fatigue they complain of numbness and tingling of the extremities, with intermittent attacks of dizziness. These attacks of dizziness and tingling are undoubtedly due to claudication of the capil-

laries in the brain and extremities, though this fact is not capable of definite experimental proof, according to Brown of Hopkins. Along with these symptoms, even in the early stages, we note very gradual but progressive loss of flesh, undoubtedly due to the fact that we are having decreased blood supply through the narrowed capillaries. Walton and Paul found that 65% of a series of patients suffering from uncomplicated arteriosclerosis suffer from vertigo, while a much smaller percentage suffer from headaches. This infrequency of headaches is also commented on by Brown, in his article in Osler's *Modern Medicine*, though it is generally supposed by the laity (and profession, often) that headaches and fullness in the head are signs of this disease. In all marked cases of arteriosclerosis with palpable arteries and high pressure, the most prominent symptoms are dizziness and vertigo, coming on after any exertion, either physical or mental. They complain constantly of claudication in the legs, especially in the early morning hours, and always imagine that they are "bilious." In these cases, of course, the heart has become hypertrophied and there is more or less palpitation, especially after meals, and the liver is in a state of chronic hyperemia, with its accompanying symptoms of gaseous distention of the stomach. They frequently also complain of what they term rheumatism, which is invariably not rheumatism, but a neuritis in arm or leg or elsewhere.

The diagnosis of arteriosclerosis as an entity is not always easy, because we have as a necessary sequel cardio-renal complications and too frequently these conditions are classed as primary when they are really secondary. The diagnostic points are:

First. Fibrosis of the arteries.

Second. Accentuated second aortic sound.

Third. Hypertrophy of the left ventricle.

Fourth. High blood pressure. I mean by high, over 160 m. m., though this latter is often absent after failure of the cardiac muscle. This latter point, I think, should be emphasized strongly, namely, that it is possible for a patient to be suffering with all symptoms of arteriosclerosis and yet have a low blood pressure.

Much discussion has taken place recently as to the value of the blood pressure apparatus. I do not hold that we should for a minute depend upon this apparatus to diagnose our cases for us, but I do hold that it is of the greatest help in enabling us to

recognize high tension and thereby warn us of the dangers of the future, and it also enables us to put down in figures the changes in tension from time to time which our fingers will undoubtedly forget. In two cases within the past year it has enabled me to warn the patients of impending danger, which warnings were disregarded, and apoplexy promptly followed.

In this disease treatment can accomplish much, but prophylaxis should take first place. In those cases due to syphilis, the treatment, of course, is too obvious to be discussed. Undoubtedly the most important point is the regulation of the quantity of food and water to be given and the mode of life to be lived. As over-eating, in my opinion, holds a large place in the etiology of these cases, it is necessary, especially in Southern climates, that the patient should be taught that the length of his life will depend, to a great extent, upon his ability to live upon the minimum of food necessary to do his work. He should eat very sparingly of proteids, and at all times leave the table not quite satisfied. This, I find, a hard lesson to teach, but a most necessary one. The ingestion of a large amount of fluids is equally bad, and the intake should be cut down to the lowest point, two pints a day being sufficient. All stimulants, including tea and coffee, must be forbidden.

As regards the mode of life, the sudden shocks, whether mental or physical, have to be avoided. More harm is done by the lifting of heavy weights or running for a car than sustained moderate exercise for several hours. Exercise is, of course, of prime importance, otherwise we should have atrophy of the muscles and constipation with its accompanying symptoms of indigestion etc.

As to medical treatment, I rely, as we all do, upon the continued use of the iodides. Personally I use the iodide of sodium in ten-grain doses three times a day over long periods of time with by-weekly intermissions of two or three days, or even a week. In the advanced cases, with constant attacks of cerebral claudication, I use sodium nitrite in two or three-grain doses in combination with the iodides, and it is little short of marvellous how many years some of these patients can live comfortably under this medication. Along with the iodides, it is necessary to use laxatives, either in the form of fruit in regular quantities or salines in daily doses, enough always to give at least two free watery actions daily, thus helping to keep down the pressure. Calomel is certainly of

enormous benefit, and should be used at least once a month, if not oftener.

It might be well to cite a few examples from our records:

CASE No. 1. Mr. A., first seen by my father fourteen years ago. At that time he was seventy years of age; had marked hardening of all arteries, though no atheroma; was complaining constantly of cramps in the legs and dizzy spells, with attacks of dyspnea on any slight exertion. The heart was, of course, hypertrophied and the kidneys slightly sclerotic. He was unable to go to work, for fear of falling on the streets from blind staggers, as he termed it, and biliousness. His blood pressure at that time though no apparatus was used, was judged to be in the neighborhood of 200. He was placed upon the iodides and nitrites, and diet regulated, and was given daily laxatives. Under this regime he lived along in fair comfort for several years, only suffering when he went to high altitudes, though he was never allowed to go over 3,000 feet. I saw him first, now some six years ago and continued the same line of treatment, giving him occasional, in fact, almost monthly, calomel in small repeated doses, which always benefited him for two or three weeks following its use. During the last three years of his life (he lived to be eighty-four) I was forced to increase my nitrites until, during the last year of his life, I gave nitro-glycerin almost every hour of the day. He was finally carried off by an attack of angina pectoris. This case showed plainly what could be done in the most extreme type of arterial fibrosis. His blood pressure during the last four years of his life rarely got below 230, and often went as high as 260.

CASE No 2. Mrs. B., first seen in 1904, following an attack of angina pectoris. She was at that time fifty-six years of age, was five feet 2 inches in height, and weighed 160 pounds; had a slight hypertrophy of left ventricle, with urine of low specific gravity and hyaline casts. Had always been a heavy eater and free user of coffee. Blood pressure was 240 at that time. She was placed upon somewhat the same mode of life and diet and medication as the first case, though she gave no symptoms except shortness of breath on exertion. Under this regime she lived along very comfortably until the summer of 1910, blood pressure always being in the neighborhood of 240, but no recurrence of anginal attacks. In August, 1910, she had an attack of what I took to be a local-

ized edema in the brain, causing very temporary paralysis of the right side, from which she recovered rapidly, though softening undoubtedly supervened, and she has now that mental state characteristic of dementia paralytica. Her pressure is still 240, and she has occasional spells of syncope, because she insists upon constantly moving about.

CASE NO. 3. Mr. C., age forty-five, seen December 16, 1909. Past history negative; heavy eater; no headaches; grippe once or twice in past ten years. On examination found weight 237½ pounds. Blood pressure 220. Slight blow with first sound at apex; urine showed no albumen; one hyaline cast; normal amount passed in twenty-four hours. Arteries palpable, both as to radial and temporal. Was placed on sodium iodide, seven grains three times a day; very light diet and limited amount of fluids.

On January 5, 1910, had slight stroke of paralysis, affecting right arm and hand, according to physician who saw him at time. Immediately ordered starvation diet and sodium nitrite, grains three, three times a day. Made uninterrupted recovery. On February 16, 1910, pressure was down to 185 and weight down to 197, at which point it remained fairly steady. The sodium nitrite was now stopped and the sodium iodide given in ten-drop doses three times a day. At present writing his blood pressure is 185; heart same; no casts in urine, and weight 200 pounds. No more attacks of dizziness, and feels well every way.

Observations in Foreign Clinics and Impressions of the Third International Laryngo-Rhinological Congress.*

By OTTO JOACHIM, M. D., New Orleans, La.

It would be strange indeed if, during a trip abroad, we did not observe some facts in medicine and surgery of interest to the observers and, it is to be hoped, to our colleagues as well. I was especially impressed by the fact that the environments of medical and surgical practice, as carried on in European, and I have in mind especially German hospitals, are peculiarly conducive to the working out in practice of such problems as may present them-

* Read before the Orleans Parish Medical Society, November 13, 1911.

selves in any particular field of our work. While in Wiesbaden I had occasion to see Prof. Weintraut, who, more than a year ago, took the lead in the intravenous injection of salvarsan. I discussed with him his further experience in this field, which may be summarized in the statement that the proper use of salvarsan is not a dangerous procedure, and is of greatest value as a curative agent in the first stages of syphilis. In the treatment of the latter stages of this disease he would, however, not like to do without mercury and the iodides. Now, Wiesbaden is a spa, where patients afflicted with rheumatism and gout are specially benefited by the mineral waters, and, in the nature of things, Prof. Weintraut works largely with problems concerning these diseases. He has recently been using a remedy called "atophan," which has the power of increasing the excretion of urates and uric acid three-fold, in normal as well as in abnormal conditions.

So great is the elimination produced by this agent at times, he stated to me, that the urine is thick with sediment due to uric acid and urates, and that the danger of formation of uric acid calculi was ever present and had been observed. In order to prevent this, he has quite recently combined his remedy with urotropin, which is known to hold uric acid in a soluble condition. This preparation had just arrived from the factory while I was there. The result of the use of this combination is not yet known. To control the clinical effect of this medication he has at his disposal an excellently-equipped laboratory and chemists trained in the chemistry of metabolism and the products of tissue change. Clinical results are controlled in every detail by laboratory investigation and, upon such foundation and under such conditions, progress in medical problems can and ought to be achieved. If a remedy of such far-reaching effect in the elimination of uric acid can be found, and can be used without harm, a most important agent will be added to our resources. Among many problems which present themselves in connection with this is the fact that the blood of the normal human beings contains no uric acid. The administration of this agent causes it to be eliminated in large quantities. Where does it come from? The contemplation of this problem alone leads at once to other problems of enormous import. In acute attacks of gout this remedy has proven of signal benefit.

Here is another instance of help given to the surgeon in the elucidation of a surgical problem. While in Munich I had the opportunity of seeing and admiring the great surgical skill of Dr. Ach, chief of service and representative of Prof. Angerer, of the Surgical Department of the University of Munich. Among many other operations, I saw him remove a carcinoma of the esophagus, near the cardia, in a man about sixty years of age. He reached the lower end of the esophagus through the thorax by removing the seventh rib. To prevent collapse of the lung, a positive pressure apparatus was used, which did the work demanded of it perfectly. It permitted administration of the anesthetic, while observing the patient's face through a glass plate which formed the top of a metal box enclosing the head hermetically from the shoulders up. An electric motor kept up pressure of eleven pounds within this box, controlled by a self-adjusting pressure bag, into which oxygen was let, as indicated or directed. It was surprising to me how easily the lower end of the esophagus was reached by this route and the diseased portion removed far into the healthy tissue, guarding, however, carefully against injury to the pneumogastric nerve. The lower end of the divided esophagus was inverted, closed and the parts finally buried beneath the readjusted pleura. The upper remaining part of the esophagus, after removal of the carcinomatous portion, was freed by blunt section as high as could be reached, which was above the level of the aortic arch. The lower end of this upper portion was similarly closed and inverted, but only temporarily. The next step of the operation consisted in a most rapid incision and dissection along the anterior edge of the sterno-cleido muscle, down to the esophagus, its freeing from the adjacent parts anteriorly and posteriorly and downwards toward the hilus of the neck, down to the point where it had been freed from below. The recurrent laryngeal nerve and the carotid artery, with its accompanying structures, were always in view and guarded by being held aside. The distal end of the esophagus was pulled up and out easily through the incision in the neck, and sewed into the carefully-readjusted parts, hanging out of this wound very far, about three inches. With equal rapidity a stomach fistula was made and a tube permanently placed and adjusted for feeding. During this part of the operation a malignant tumor of the posterior ventricular wall was discovered. The

operator stated at once that the hope of any favorable result was thereby frustrated, and that hereafter he would always begin this operation by first opening the stomach.

The exact closure of the pleura over the imbedded esophagus and the approximation of layer by layer of the tissues of the thorax concluded the operation. The lowest layer of sutures in the thoracic wall included the pleural covering of the lung. When an air-tight closure of the parts had been accomplished, the inflating pressure was relaxed and slowly discontinued. The intention of the surgeon was to connect at some later time the upper end of the esophagus by the interposition of a piece of gut with the stomach or bowels, placing this tube under the skin of the front of the chest. This has been done successfully by another surgeon.

If the description of the operation is in any manner inadequate, I want you to remember that it was not an ear, nose or throat operation. In speaking about this operation at a later time with the operator he informed me that he was developing and perfecting the technic of this operation by animal experiment, and invited me to be present. For this purpose the hospital furnished him with ample means, expert assistants and laboratories, where these experiments could be made under such conditions as to insure the best possible results. In this way progress and advanced methods are attained. These favorable conditions, which lend themselves to advancement, are there the rule, and with us the exception, and I am glad to say that New Orleans is among the exceptions.

In watching this operator I was impressed with the speed with which all those surgical steps were carried on, which recur in practically every operation. The incision, dissection, the use of hemostatic forceps, tying of vessels, suturing by the operator or his assistants, the handling of the right size of gauze sponges or of large pieces of gauze, the furnishing of needles and sewing material of the necessary kind and strength, the handling and the removal of instruments, were matters which were permitted to take up only the absolutely necessary time in which a surgeon of experience and dexterity could do these ever-recurring procedures with proper assistance. To the manipulation and operation of the diseased parts, all the time and careful consideration necessary was given.

It is strange to observe how the pendulum of asepsis has swung back to a primitive simplicity, without apparently endangering

results. In this clinic, the sterilization of the hands consists in usual thorough scrubbing, followed by washing, or rather wetting of the hands and arms with a one per cent. solution of iodine in benzine for five minutes, and wearing of dry sterile rubber gloves. If one observes how quickly perspiration collects under rubber gloves, and how rarely a glove is not torn during an operation, it seems questionable if the glove gives all the protection to the patient we credit to it. The sterilization of the patient is simpler yet. The field of operation is shaved dry, and lightly sponged off with benzine and twice painted freely with tincture of iodine, the excess of which is wiped off gently with gauze. There is no washing or scrubbing of the parts, as this usually causes an iodine eczema. The field of operation is most carefully protected from the rest of the body and the operative asepsis is without fault.

A great deal of operating is done under the influence of scopolamine pantopone. The night before the operation, the patient receives a good dose of veronal, and three-quarters of an hour before the operation an injection of the above mixture. Pantopone was highly spoken of to me by Fred v. Müller, whose eminence in the field of internal medicine is known to all of you. It is an opium derivative, causes no nausea, does not lend itself to habitual use, and is dependable. It does not constipate, leaves no headache, and can be used hypodermatically. It is preferred by him to any similar preparation. Through an unfortunate illness in my family, I was compelled to stay at the internal and surgical clinic of the university for nearly a month, and had occasion to observe personally the methods and results of these workers in medicine.

But, after all, the most interesting and important event during my stay abroad was the meeting of the Third International Laryngo-Rhinological Congress, which met in Berlin from August 29 to September 4, under the presidency of my venerable teacher, Prof. B. Fraenkel, who, I am sorry to say, died to-day. I attended this congress in the capacity of vice-president of the Southern Section and as delegate of the American Laryngo-Rhino and Otological Society. This congress was visited by nearly 500 specialists from the entire civilized world, and was a complete scientific and social success. Other representatives from American scientific societies and universities were Drs. Holmes, of Cincinnati; Simpson and Newcomb, of New York; Goldstein and Loeb,

of St. Louis, and Todd, of Minneapolis. Of course, many others from this country were present as distinguished members. I, with many others, were sorry to miss our own Dr. de Roaldes, who was registered, however, as a member of the congress. Another source of regret was that our Government had no official representative to reply to the welcome extended by the officials of Germany and Berlin. The social side of this international meeting was by no means the lesser attraction, and the liberality of the State, which loaned one of its finest buildings for the use of the congress, and of the city, which gave a great feast to the members of the congress and their ladies in the enormous and beautiful room of their city hall, were beyond expectation any visitor could entertain. We were received by the Mayor and Councilmen, wearing their insignia of office, and entertained in a manner worthy of their great city. The profession of Berlin took up, by a series of entertainments, all the time which could be spared from the meetings, in such a hearty and enjoyable way that those who were present will never forget, and will feel forever deeply thankful. This part of the program has, however, no room in a paper on medical subjects, but bears on it because of the personal acquaintance possible with the prominent members of our specialty of whom we read and whose writings we esteem all the more, with the impression of their personality in our minds.

The immense amount of scientific matter the Congress had to dispose of necessitated the ruling that the speakers appointed to open discussion of the main topic selected for the day could not have over ten minutes; speakers on these topics only five minutes. Papers on the program were limited to five minutes, and speakers thereon to three minutes. Those who desired to discuss a paper were called upon after sending their names to the chair. Business was thereby expedited so effectually that all subjects and all papers had a chance to be heard. The reading of the papers resolved itself into stating the proposition, the manner of reason or investigation, in which the writer proceeded and the conclusions he arrived at. It was remarkable to what extent the opaque projecting apparatus was called into use. Very often the paper consisted of a series of demonstrations on the screen and of stating the result or proving the proposition by projecting on the screen a reproduction of the observation. Instruments and their method

of use were demonstrated from slides or pictures. The object lesson method was extensively called on to supplement the didactic and even theoretical discussion.

I am afraid I would keep you until late if I were even to enumerate the topics discussed and the special points brought out. The thesis for the first day was: "The Relation of Experimental Phonetics to Laryngology." In connection with this subject a most complete, interesting and instructive exhibit of apparatus for phonetic investigation had been arranged, occupying two large halls. After the appointed speakers had finished all papers relating to this subject were read and the subject was discussed in its entirety. On the second day "Bronchoscopy and Esophagoscopy, Their Indications and Contraindications," was the topic for the day. Chevallier Jackson, of Pittsburg, whose expertness in this branch is paramount in this country, was one of the official speakers. To everybody's regret, he was unable to be present on account of illness in his family. He has constructed and uses apparatus in some essentials differing from the apparatus used abroad, and with it he has accomplished some of the best work in this line done anywhere in the world. He enjoys the universal esteem and love of all who know him.

The thesis of the third day was "The Lymphatic Apparatus of the Nose and Nasopharynx, and Its Relation to the Rest of the Body."

Around the subjects of the second and third day grouped themselves the most important papers, as these subjects occupy the center of interest in our specialty at the present time. The former on account of the additional field of new visual investigation, diagnosis and operative procedure, the latter because we are much concerned about the spread of, at times fatal, infections from the nose in its diseased condition or after operative procedures.

The thesis of the fourth day was: "The So-called Fibrous Polypi of the Nasopharynx, the Place and Mode of Their Insertion and Treatment."

On this subject many cases of great interest were related and a variety of operative measures mentioned which had proven of value. Electrolysis by means of large and heavy electrodes using a considerable ampereage have been used with much success by Rechert, of Bremen. Noteworthy papers were read by Prof. Luc, of Paris, on his present method of operating for frontal sinus-

empyema. The question of non-poisonous local anesthesia received, deservedly, much attention and was of great interest to me as I have experimented considerably along this line. The use of alypin suprarenin L. for surface anesthesia and of novocain-adrenalin for submucous work is called to your especial attention on account of its efficacy, lack of danger and freedom from unpleasant symptoms. These combinations, properly used in proper proportions, will do all and more than cocain can do. This is of greatest importance when we operate on children, who are especially susceptible to the poisonous effects of cocain.

A resolution was adopted and a committee appointed to set on foot a collective investigation of ozena, with instructions to report at the next meeting of the international congress. Let us hope that a cure may be found for this most distressing condition. This alone would amply justify this and the next congress, which will take place at Copenhagen in 1915.

Splanchnoptosis.*

REPORT OF CASES RELIEVED BY THE USE OF ABDOMINAL SUPPORTER, HYGIENIC AND DIETETIC MEASURES.

By ALLAN EUSTIS, B. S., PH. B., M. D., New Orleans, La.

Splanchnoptosis or visceroptosis more fully explains the true clinical picture than the older term gastropptosis, which had its origin in the fact that the majority of these cases present gastric disturbances as the chief symptom. With the perfection in Röntgen ray technic, however, we have learned much more about such cases, and we now know that all cases of gastropptosis are associated with more or less enteroptosis and often with nephropptosis. I am led to present this subject to-night, as I believe it much more frequent here than is generally supposed. Histories of only two cases of gastropptosis and none of enteroptosis on file in the Charity Hospital. While I found during my three and a half years of practice in the country only nine cases whose symptoms could be referred to this condition, I have seen seven cases since my return to New Orleans, two months ago. The

* Read before the Orleans Parish Medical Society, November 27, 1911.

fact that in Vermilion Parish the women wear corsets only on occasions, and the men usually wear suspenders, while both sexes lead an active out of door life, may account for this apparent infrequency in the country with relative frequency in New Orleans and probably in all cities.

FREQUENCY.—I have always been of the opinion that statistics prove very little, as so many factors enter into the compilation of such, but it is agreed by all writers¹ that we find the condition far more frequently in women than in men. It is also agreed that marked splanchnoptosis may exist for a while without any subjective symptoms, but that certain symptoms present themselves which are not properly referred to this anatomical alteration in the viscera I am also convinced.

Symptoms: In a paper such as this it is utterly impossible to describe the many symptoms found in so-called neurasthenics which can be referred to this anatomical condition, and the full scope of the subject can be covered only by a symposium covering the nervous, orthopedic, nutritional, digestive and gynecological and surgical aspects of the subject. Chief among the subjective symptoms are dyspepsia with hypochloridia or achloridia, headaches, dizziness, constipation, rheumatoid arthritis, vague body pains, nervousness and hysteria and many other so-called neurasthenic symptoms. Which of these symptoms are referable to the stomach and which to the large and small intestines cannot be considered here, and it must be borne in mind that no two cases will present the same symptoms, and a case may present one or all of the aforesaid symptoms.

As objective symptoms, the condition is usually, but not always, found in slender, anemic, narrow-chested individuals whose axillæ are in the same plane as their hips. I have seen it, however, in apparently stout women, but close examination of these cases shows that their deposits of fat are in the neck and trunk, while their limbs are slender. In the erect position the upper abdomen is depressed, while the lower portion is distended, and examination shows flaccid abdominal muscles, with pendulous abdominal walls. A splashing sound can usually be elicited around the umbilicus, especially about one hour after meals. While this sound may be elicited in an apparently healthy individual if the abdominal walls are thin, however, as pointed out by Stiller and Kuttner², in these

cases, even the stomach has lost some of its normal muscular tone.

Diagnosis: The surest means of diagnosis is the Roentgen ray, taking skiagraph every six hours after a bismuth meal for twenty-four hours. One must bear in mind that the condition is often associated with gastric or duodenal ulcer or chronic appendicitis, and when such is the case treatment must necessarily be based upon this idea. I agree with Hirschfeld³ that only in those debilitated by disease of some other organ or in hysterical, very nervous individuals will visceroptosis cause a decided disturbance of nutrition, but when such exists the false anatomical relation of the viscera demands treatment, and it is surprising how soon many of the nervous phenomena will disappear under proper hygienic, dietetic and medicinal treatment.

Hygienic Treatment: Tight lacing should be prohibited, and the use in women of a low straight front corset, to be adjusted while lying in bed, should be enjoined. I have found the best results from the use of an abdominal supporter which will support the lower portion of the abdomen without constriction. It must be kept down by straps or rubber tubing passing between the thighs, or by means of straps fastened to the stockings. The supporter is not uncomfortable after a few days' wear, and I have had patients tell me that they are more comfortable with it than without it. Regular exercises to develop the abdominal muscles have quite a beneficial effect and patients must not be allowed to lift heavy objects. It is of interest to note that of the seven cases seen here four were men, three of whom are freight handlers and one a furniture handler, their occupations requiring them to lift much heavier objects than their muscular development would indicate. Where there is gastric atony small, regular meals, eaten slowly, with one to two hours reclining on the right side after meals, assists the stomach in emptying itself. Where gastric stasis is associated with dilatation of the stomach gastric lavage should be practiced four hours after each meal.

Medicinal Treatment: This will depend upon the condition of the stomach and intestines, and no routine treatment can be advocated. A preliminary cholagogue purgative should be given and repeated as often as indications arise, my favorite combination being calomel, 3 grains; phenolphthalein and powdered rhubarb, each 5 grains.

If there is a hypochloridia or an achloridia, contrary to Hirsch-

feld's opinion, it seems logical to give dilute hydrochloric acid, which I have done in those cases presenting this condition with excellent results, as shown by cases.

Tincture of *nux vomica*, ten drops; tincture of cinchona compound, sixty drops, in water, before meals, will improve the appetite and improve the gastric mucosa and musculature as well as intestinal stasis. For the chronic constipation I have lately, after personal suggestion of Mr. Lane, been using one, two or three-ounce doses of liquid albolene each night, with gratifying results. It acts mechanically, with no griping or disagreeable effects, and is tasteless. Instead of patients acquiring a tolerance of it, it has been my experience that by proper dieting the dose can be gradually reduced until unnecessary altogether.

Dietetic Treatment: This will depend upon the motility of the stomach and intestines, the grade of nutrition and upon the associated disease. In the following cases better results have been obtained by regarding the enteroptosis as the fundamental cause of the symptoms: For the resulting intestinal stasis a low proteid diet, with plenty of cellulose, has been given in the form of oatmeal, hominy, cornbread, grits, stewed corn, mashed sweet and Irish potatoes, carrots, pumpkin and stewed fruits and preserves. Achloridia has changed to a free hydrochloric acid content of 30 in one month and all gastric symptoms have disappeared without the lavage in two cases and assisted by lavage in one case, in which there was dilatation of the stomach.

Surgical Treatment: In many cases dietetic and hygienic treatment fail, and in these cases I believe the short circuit anastomosis of the ileum with the rectum, as advocated by Lane⁴, is indicated. I had the pleasure of observing the results of his work during the past summer, and the improvement in his cases after relieving the colonic stasis and putrefaction is truly remarkable. What will be the ultimate result of allowing the colon to remain inactive, as a result of this operation, can only be surmised at the present time.

A brief review of the following cases will show what can be accomplished along dietetic medicinal and hygienic lines:

CASE 1.—Mr. U. V., Creole farmer, 52 years old, had always led an active life until four years before he consulted me, on October 25, 1909. For the past five years he did very little farm work, allowing his sons to run the farm, but each fall, during the rice

harvest, he would drive a wagon with rice to the mill. He would assist in loading the heavy two hundred-pound sacks and also in unloading. He complained of persistent belching, souring of food in his stomach, headaches, pains between the shoulders on awakening in the morning, occasional attacks of dizziness, but oftener of yellow specks before his eyes. He was constipated and indulged in a liver regulator each night, which gave him a daily action. He had lost thirty pounds in weight, but had no cough or rise in temperature, and had no abdominal pain. He was the father of five healthy children and there was no history of tuberculosis in his family.

Examination showed a tall, narrow-chested, anemic individual, but in whom heart, lungs, liver and spleen were normal, and with no palpable atheroma of the peripheral vessels. Pulse 76, blood pressure 190 and temperature and respirations normal. His abdominal walls were relaxed, the upper portion of his abdomen was retracted and the lower portion protruding like a six months' pregnancy. It was tympanitic over the entire lower portion. Urine was normal except for a high indican index. He belched incessantly while being examined, and stated that it afforded him some relief from the bloated feeling. He had never vomited in his life, as well as he could remember.

A toast and water test breakfast given next morning and withdrawn in one hour presented: Amount 250 c. c., absence of free hydrochloric acid, total acidity 6, lactic acid present, large amount of mucus, undigested meat fibers taken the previous night, starch granules, but no blood or pus cells. Capacity of stomach 3,500 c. c. He was given calomel, 3 grains; phenolphthalein and powdered rhubarb, each 5 grains a digestive mixture of dilute hydrochloric acid, 15 drops, in essence of pepsin, half an ounce, to be taken in half glass of water after meals. He was instructed to lie down on his right side for two hours after meals, and to drink no water with his meals. An abdominal supporter was ordered, and he was given a daily morning dose of effervescent sodium phosphate. In addition, he was put upon a cereal diet and forbidden to lift anything, while abdominal exercises were practiced each morning and night. All work was stopped and he spent the following three months hunting in the marshes, which, anyone who has attempted it, knows, exercises all of the muscles of the body. Living at a distance of

fourteen miles from my office, lavage could not be practiced oftener than once a week, and this was done only with the idea of ascertaining the amount of gastric motility. In three months' time his free acidity had increased to 30, all belching had ceased, there was no discomfort after meals and the digestive mixture had been diminished to a dose after the evening meal, but thereafter discontinued. He had gained ten pounds in weight, but was still wearing his belt. I had news from him on a recent visit to Abbeville and I was informed that he had gained thirty pounds, was eating anything he wished and was practically a well man.

CASE 2. E. G. White, male, 28, a resident of New Orleans and freight handler. Father died of tuberculosis and mother of nephritis. Two brothers and two sisters dead, cause unknown.

Patient has had the usual diseases of childhood and two years ago had hemoptysis. Has had dyspepsia for the past three years, a bloated, oppressed feeling following each meal, relieved by belching. He has been a sufferer from constipation for ten years and has fairly lived on liver regulators.

One week before coming to the clinic, on October 8, 1911, he had a dizzy spell and almost fell, which he felt was returning, causing him to come to the hospital. There was no definite pains, but patient stated that he felt tired and lazy. He had not complained of headaches.

Examination showed heart normal, lung apices not retracted, but an area of consolidation in the right apex posterior and one in the left lung anteriorly discernible over the fourth rib three inches from the median line. No rales were audible, but bronchial breathing over spots. Temperature 99.5, pulse 104, respirations 18. Liver and spleen normal, and there are no areas of tenderness in the abdomen. The abdominal walls were relaxed, the upper portion retracted and the lower distended with a tympanitic note over the lower portion. Urine examination negative except great excess of indican. His bowels had not moved for three days and he was given a purgative and placed upon a low proteid diet.

He was referred to Dr. Samuel for skiagraphs.

October 16.—He has been on cereal diet and feels better, but still constipated. Albolene in two-ounce doses each night ordered and an abdominal supporter adjusted.

Gastric analysis after toast meal, withdrawn in one hour and a

half: Amount 50cc, free acid none, total acid 1.0, no lactic acid, no blood, but large amounts of mucus.

Urine negative and free from indican.

Examination of sputum does not show any tubercle bacilli. Digestive mixture of hydrochloric acid and pepsin ordered.

October 24.—Feels better, but has not had a bowel movement for three days, owing to albolene having given out and patient not knowing necessity of continuing same. He has not belched since wearing the belt and taking the digestive mixture. Examination of gastric contents: Amount 25cc, free acid 15, total 20. He did not take digestive mixture after test breakfast.

Calomel purge given, albolene each night and low proteid diet continued.

October 18.—Feeling well, bowels move twice daily. Taking two ounces of albolene each night. Free acid 40, total 65.

October 23.—General condition improved, has gained two and one-half pounds. No more belching or dizziness, and no indican in urine. Full diet ordered and put upon syrup iodide iron, hypophosphites and cod liver oil.

October 26.—Still feels in good health and patient states that he is getting to realize that he is a man. Feels energetic and has eaten a whole box of sardines without any discomfort.

CASE 3. Mr. A. A., white, *aet* 29, freight handler in furniture factory. Symptoms: Headaches, dizziness, continuous belching, smothering feeling after eating, coming on in about two hours. Nervousness, irritable temper, and loss of weight. Abdomen pendulous, general visceroptosis confirmed by skiagraph by Dr. Samuel. Gastric atony, with achloridia and lactic acid. All symptoms relieved in two months by abdominal supporter, gastric lavage twice daily and muriatic acid after meals, with low proteid diet and albolene at night. Gain in weight was twelve pounds.

CASE 4. E. L., white male, laborer, *aet* 49, was exhibited to the Society as presenting a typical abdomen with visceroptosis. Gastric symptoms predominated in belching, heavy feeling after meals, and marked emaciation. Gastric analysis revealed an achloridia with stasis.

CASE 5. Mrs. N., white female, married, but has never been pregnant. Symptoms: Headaches, dizziness, rheumatoid pains in shoulders and extreme nervousness. No gastric symptoms and

no gastric analysis made. Diagnosis confirmed by skiagraph by Dr. Henriques. Abdominal supporter, with low nitrogen diet and sodium phosphate, with relief of symptoms.

CASE 6. Miss D., white female, 27. Symptoms: Almost constant headaches, pains in knees, occasional attacks of indigestion, dizziness and constipation. Gastric analysis not made. Diagnosis confirmed by skiagraph by Dr. Henriques. Abdominal supporter and low proteid diet, with relief of symptoms.

CASE 7. Miss C., white female, 25. Symptoms: Coated tongue, loss of appetite, headaches, vertigo, frequent attacks of weakness, colicky pains in region of umbilicus, great flatus, pains between shoulders on rising in morning. Besides visceroptosis, which was confirmed by skiagraph by Dr. Henriques, there was associated uncinariasis. Thymol treatment instituted, and later abdominal supporter ordered, with low proteid diet, with marked relief of symptoms, but patient still under observation.

CASE 8. A. K., white male, 26, freight handler. No gastric symptoms, but vague body pains, a constant exhausted feeling, headaches, loss of weight from lack of appetite. Stomach touching brim of pelvis, but motility good. Constipation, with headaches. Supporter, with albolene, showed great improvement. Still under observation.

CASE 9. Mrs. A. S., white female, 28, married, and mother of one child five years old. Symptoms: Headaches, vertigo, emaciation, nervousness, with frequent attacks of hysteria; constipation. Gastric stasis, with achloridia. No subsequent lavages, after the first, could be performed, owing to the extreme excitability of patient. Abdominal supporter ordered; frequent doses of sodium phosphate and low proteid diet, resulted in complete relief of all symptoms and a gain in weight of thirty-five pounds. I observed this case for a period of two years, and, when last heard from, was in perfect health, but complained of being too stout. Original weight, 118 pounds; weight after two years, 153 pounds.

CASE 10. Mrs. P. H. B., white female, 29, mother of two children. Symptoms: headaches, vertigo, nervousness and hysteria; smothering feeling at times; emaciation, with uterine prolapse. Uterus supended by Dr. S. M. D. Clark, with appendectomy and partial oophorectomy. Abdominal supporter and low proteid diet, but patient failed to carry out instructions; wears the belt only on

occasions, and has never followed a strict dietary. She has shown some improvement, but I consider her as a type who fail to improve under any regime, due to lack of desire on their part to get well.

These cases show well what can be accomplished along hygienic lines with a class of cases which are universally difficult to treat, and represent records of sixteen cases, in which I have obtained valuable assistance in overcoming the complex symptomatology by diminishing the absorption of intestinal toxins of proteolytic origin.

Case 10 is the only one in which I did not feel that I owed the relief of headaches, etc., to the hygienic procedures as well as the medical treatment. It must not be expected that a chronically inflamed appendix will be relieved, nor a gastric ulcer healed, by such measures, but where there is no organic lesion, as in these cases, good results can be expected.

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The Origin of Torticollis: Illustration of a Case Showing Professional Dyskinesia.

By TOM A. WILLIAMS, M. B., C. M. (Edin.),

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It is not often that the pathogenesis of a torticollis is so clearly elicited as in the case now reported, although it is true that Janet, in "Les Obsessions et Psychasthénie," has traced the source of many tics, and has shown how often they are the symbols of former acts of a clearly purposive intent.

Failure to think in terms of function is responsible for the persistent attempt, especially of surgeons, to find a local cause* for such an abnormal movement or attitude as torticollis. When none could be found, a hypothetical neuritis used to be invoked, and division or excision of the spinal-accessory nerve was often re-

* Though it is true that local irritations are in some cases the provocatives of tics, yet they do not act in a directly reflex manner, but through the medium of the psychic, by setting up a defense-reaction much more complex than that of a simple reflex.

sorted to, usually utterly without benefit, although in some cases of hysterical type the enforced rest after the operation and the violent physical impression abolished the tic of the neck, for a time at least.

Naturally, such an operation was in itself quite inefficacious, for it is clear, even after a superficial examination, that not only do the sterno-cleido-mastoid and the trapezius contract, but all the muscles of one side of the neck, participate in the torticollis; so that a cutting operation to abolish the movement would demand division, either of the cervical plexus or its roots, in at least the first six segments of the spinal cord, as well as of the spinal accessory nerve. But the exceedingly involved explanations demanded to account for a torticollis by a disease of lower neurones need no longer trouble us, for the mechanism of the vast majority of cases is purely psychogenic, and the case which follows is a beautifully simple example thereof.

CASE OF TORTICOLLIS AND GRAPHOSPASM.*—Single woman, E. L., aged thirty-one, expert counter in the U. S. A. Treasury.

Complaint: Cannot use right arm, for each motion causes the head to turn to the right, "and I am compelled to look right backwards, with a most powerful force, over which I have no control." It began three months before, with a pain behind the right shoulder, running round to the right side. She now has pain all the time. She consulted a physician, who called it neuritis, and advised massage. The nurse who was called feared to massage her, so electricity (*sic!*) was tried, and did good at first, to both the pain and the movements.

She had fallen on this shoulder in August, but it did not trouble her after the first few days. The movements and pain had been bearable until a month before she saw me, for she had left her work from time to time—on one occasion for three weeks.

Present State: Appetite good; no indigestion or pain, and the general physical examination showed nothing abnormal, except loss of weight, atonia and exaggerated reflexes.

Physical Examination: No marked defect of memory, attention, judgment in general matters, nor emotional reactions, but she is much worried about her condition, which she *believes to be*

* Scriveners and Telegraphers Dyskinesias are studied in a forthcoming monograph. See preliminary communication in *Wash. Med. Annals*, May, and *Mo. Cyclop.*, July, 1911; also *Trans. Med. Soc. of Va.*, 1910.

a *physical* malady. As will appear from the psycho analysis, there are other worries which she did not at first reveal.

Onset: She had no unusual worry at the time, she declares, but, on account of straitened finances and the delicacy of her mother, she has been anxious for some years. As a result of psychoanalysis, it was ascertained that, three months before the tic, there had occurred a serious unpleasantness with a comrade in the office, whom she stigmatized as an ignorant, conscienceless woman. The emotional bitterness displayed in the patient's account was an immediate index of the serious pathological significance of this episode. Her attempt at harmony caused no satisfaction; so she declares that she ceased worrying. "I had tried to adjust it, but failed, for she is a married woman, older than and above me in the office. She is angered because I do not associate with her. But, as she had spoken disparagingly of my mother, I taxed her, only to meet with a denial."

She brooded deeply over this episode, and as her work in counting can be performed quite automatically her thoughts were free all day long to dwell upon the constant unpleasantness of being in the same room as the other woman, who *sits behind her on the right*.

Some three years before she had renounced marriage for the sake of her mother, on account of a love affair which had turned out unfortunately. Her mother, too, had had an unfortunate marital experience, the knowledge of which had tended to strongly depress the patient's mind. But, in spite of all this, she declares that her home is happy with her mother and sister, for whom she has a strong affection and admiration, and terms "a practical Christian." She has always been most anxious to do her duty and to make good at her work, but she confesses that, since the quarrel with her fellow-worker, her thoughts have been preoccupied by the unpleasantness it has caused, in which, however, she believes herself to have the sympathy of many of the other girls. But at work she cannot help thinking of the other woman.

Explanation of the Origin of the Tic: It is evident that the girl's thoughts about her enemy cause her head unconsciously to veer and turn towards where she knows her to be. This is the less easy to resist, because her attention is partly occupied by the counting of the money, which is her duty. As she is anxious to

do this as rapidly and well as possible, and mistakes or insufficient work not being condoned, she is the less able to resist the motor response to her underlying thought, which is essentially a desire for an understanding with the other woman and a reconstitution of her own desire to be in harmony with her surroundings. By now, however, by a process of psychological substitution, the need of turning the head has come to accompany every use of the right hand, so that she is unable to use her knife at the table without turning the head, and an ensuing rigidity of the arm and head in the effort to arrest the torticollis and to accomplish the act she wishes. In writing, it is the same thing, and the case affords an example of writer's cramp mechanically produced by torticollis of mental origin, which, by a psychological association, has in turn become producible by any use of the hand or arm.

The cause of pain is the action of the muscles antagonistic to the turning movement, which she consciously seeks to prevent. Between the automatic desire to turn the head and the conscious efforts not to do so, the muscles of the shoulder, neck and upper part of the chest are maintained more or less constantly in a state of powerful contraction, and the severe drag upon their attachments, combined with a state of fatigue, provokes the pain of which the patient complains.

Even at rest the patient now holds the head somewhat to the right, and keeps contracted the neck and shoulder muscles on that side. The attempt to turn the head straight, or to the left, is not accompanied by *angoisse*, strictly speaking, but causes a distress referable to the muscles at the right side and to the consciousness of her incapacity to freely perform the desired movement. She feels an actuating force stronger than herself. It is from such feelings in the credulous and superstitious that may arise the notion of possession by an external being, a demon. If the woman's tic is not cured, I have no doubt that in course of time anguish will accompany efforts to suppress the movements; but at present the syndrome is not complete.

There are somatic factors in the case, for the tic is always worse during the catamenia, when she has much pain, nausea and sinking feelings of the heart, with flushes, chills and headache, and often has to take to bed. These symptoms are said to be due to uterine malposition.

She has always a marked exophoria, and had to abandon, on account of dizziness, her original work of spreading bills.

But the psychological factor is the main one, for the torticollis is proportioned to the insistence of the thought of her painful relationship with her fellow-worker, and when she succeeds in dismissing this from her mind the tic rarely occurs. This, however, has been difficult, because she had no confidence, not being willing to trouble her tired sister, as had been her habit, and a clergyman to whom she was much attached having left Washington. Hence there was no relief from brooding over her grievance.

It would be a gross error to attribute this patient's neuroticism to her loss of weight, atonia and physical depression in general. It is these, on the other hand, which are secondary to the psychological perturbation she had suffered. The mechanism is somewhat as follows: Shame and grief destroyed appetite and prevented assimilation; worry caused insomnia; hence came malnutrition, with asthenia of the neurones, an intoxicative condition in the wider sense of the word. In this way is produced the muscular hypotonia. Exaggeration of the deep reflexes might be explained as due to a specially great asthenia of the cortex, the Rolandic portion of which inhibits deep reflex response.

Treatment and Progress: I explained the genesis of her affection, and gave a good prognosis, justified by other cases of severer type (*N. Y. Med. Jour.*, Trans. Va. Med. Assn., 1910). My first prescription was ten days of contentment in the country, and to try to be less hyper-conscious during that time, paying no attention to her troubles or to the torticollis.

Six days later she returned, not having followed the prescription, with a pain in the head and the tic worse than ever. I gave her exercises in psychomotor discipline, consisting of dealing a pack of cards into two heaps while her head was turned away from the affected side, and cutting along lines ruled on a piece of paper. In a few days she greatly improved in performing these tasks; the tic greatly diminished and the pain in the shoulder disappeared.

But the fact that this improvement became less rapid, as was to be expected, so discouraged her that she relaxed her efforts during the exercises, and substituted therefor a constant tension of the muscles in an attempt to rectify the abnormal posture of her head and neck. This created pain at the angle of the scapula,

where the latissimus dorsi is attached, and she lost courage. She was advised to go out and relax, and to abstain from work for at least another month. This she declared herself unable to do, and persisted in returning to work against advice. The torticollis was greatly aggravated, and she gave up attending. I have learned recently that she had to remain away from work for two months, during which she took cheiropactic treatment, which improved her torticollis, but not the professional cramp, and she does her work entirely with the left hand, and her bitter mental attitude is worse than before.

Louisiana State Medical Society Proceedings.

EDITED BY PUBLICATION COMMITTEE,
DR. JOSEPH D. MARTIN, Chairman, 141 Elk Place, New Orleans, La.

DR. A. A. HEROLD, of Shreveport, read a paper entitled

Experience With the Modified Wassermann Reaction.

In presenting to you a few isolated facts from my experience with the now-famous sero-diagnosis of syphilis I do not intend to bore you with a dissertation on the reaction of Bordet and Gengou, nor to discuss the various modifications of the test as originally laid down by Wassermann. I propose to speak of this matter from the standpoint of the "laboratory as an aid to the clinician," for, so often do we hear the question asked: "Of what practical good is this work?" Or, perhaps this statement is made: "I shall treat my patients for syphilis when they show that they have it; in doubtful cases I shall await developments."

Being the only one in Shreveport who has been doing this work to any extent, I feel justified in imposing upon you with the details of some of my cases. First, let me state, however, that I have been employing exclusively the Tchernogubow modification as is used by Dr. Fraser B. Gurd, pathologist to the Touro Infirmary, the first whom I ever saw employ it.

Of my last twenty-two cases, I have secured thirteen positives and nine negatives. Discussing the positives, I wish to state that,

in two instances, the same patient is included twice. In the case of McF. a dose of salvarsan was given, intravenously, immediately after the first test; five weeks later he stated that he was about to leave the city (all lesions had completely cleared up), so I took another specimen of blood and got another positive. The other case recorded was a man with typical luetic ulcers, from an infection dating back about seven years. He gave a strongly positive reaction; salvarsan was administered. Nearly three months later I saw him; all lesions, except one on his leg, being well, I asked him to let me have another specimen of his blood. Again I got a positive, though apparently not quite as pronounced as previously, I have advised him to take another dose of salvarsan.

Of the other positives, the only ones of special interest were B. and W. The former had had a dose of "606" for undoubted syphilis, and had markedly improved for a while. After five weeks the lesions began to return. I obtained a weakly positive, indicating to my mind that the remedy had not been quite sufficient to overcome the disease. Another dose was administered, and at last report patient was apparently well.

The other case, W., a man of some knowledge of medicine, had a primary lesion in January. Both he and his physician being suspicious, they went to a doctor who does microscopical work. The latter curetted the sore and made a number of smears, from which he reported "no *treponema pallida*." Our friend went home and waited, and was rewarded for his patience by discovering, over two months later, a very faint general eruption. I confirmed his suspicions with a strongly positive reaction, and he went home again with a more satisfied mind and an arsenic-laden anatomy. He will follow up this treatment with mercury, and later on take another dose of salvarsan, if the serum test justifies it.

Now, as to negatives. One case, B., gave a perfect history of a chancroidal infection, but was told by a medical man that he had "the old rale"; took mercury and iodide for several months at intervals. An eruption similar to one on which diagnosis of syphilis was based appeared after marriage, but disappeared without treatment. His wife, however, gave birth to hydrocephalic child. This frightened him, and he was more than ever anxious to know if he really ever had the disease. Although he had not taken any treatment in some time, and presented no signs of the disease,

the last incident made him anxious. A negative result with his blood-serum has reassured him.

Another patient, P., was suffering from ascites, from hepatic cirrhosis, and also had albuminuria. In an old trunk he found a prescription for mixed treatment, given to him by a physician several years previously, when he had what he described as chancroidal infection. Although a drinker, we feared that syphilis may have been an etiological factor in this man's liver trouble; a negative reaction cleared this up.

Probably the most interesting case in this group is that of Mrs. M., a lady of doubtful character. She gave birth to a child which presented undoubted evidences of congenital lues; a reaction on her proved negative—a result which worried me considerably, inasmuch as I had previously read a paper in which the author claimed that Colle's law had been completely disproven, as the mother of a syphilitic child is immune to the disease, only because she herself has it, same being proven by the fact that the mother's serum invariably yields a positive Wassermann. In looking up the literature, however, I find this statement contradicted and my result verified, for in an editorial in the *Interstate Medical Journal* for April, 1911, we find:

"At a recent meeting of the Medical Society of Vienna, Dr. Hochsinger reported the case of two infants, aged three weeks and three months, respectively, who had yielded positive Wassermans and who had unmistakable signs of congenital syphilis. The husband and wife, upon being questioned, stoutly denied ever having had syphilis, and, upon the Wassermann test being made, it proved negative. Nothing daunted, and evidently an investigator bent upon finding out who the fathers of the children were, Dr. Hochsinger plied the women with questions until they confessed the truth. The two inamoratos were found, and Dr. Hochsinger's endeavors were rewarded, as both men gave a positive Wassermann reaction. * * * Thus can be plainly seen that a new chapter in socio-medical science has been written, that may lead to all the light required in the investigation of the real paternity of a child that is the unhealthy offspring of healthy (supposed) parents. * * * Hence, are we wrong in stating that, with the added knowledge of the Wassermann reaction, which, by the way, has not as yet been exploited in the press, the time is not far distant when doctors will be pleaded with by suspicious husbands to make the test in the hope that the illegitimacy of their children and the unfaithfulness of their wives may be proved?"

Coming, now, to my original point—viz., the Wassermann reaction as a practical aid to the clinician, I wish to state that some of my cases, above reported, conclusively show its value; however, its greatest utility is probably in cases which give a perfect history of infection, but are not satisfied that the treatment which

they have undergone has cured them. Given a case with typical Hunterian chancre, followed in a few weeks by classical secondaries, you are justified in treating him without a confirmatory laboratory test; for, like every other reaction, the Wassermann is not infallible, and a case, as above stated, cannot be mistaken; but, after this patient has had one or two "shots" of "606" he will come to you with the questions: "Doctor, am I well? Can I safely marry?" There's where the value of the reaction comes in; for if, after leaving off treatment four to six months, he presents no clinical symptoms, and gives a negative Wasserman, you may pretty safely tell him "yes."

This is a subject which could be discussed indefinitely, but, as I have done what I started out to do—viz., give you the practical side of this test from personal experiences, I shall leave it to others better versed for discussion.

DR. J. H. FLORENCE, of Houston, Texas, read a paper entitled

Insurance Companies in Their Relations to Sanitary Science.

It is a well known fact that a large proportion of the profit made by life insurance companies arises from a saving in mortality; hence, the fewer the number of deaths among policyholders the more profitable the business. Therefore, it requires no thought to deduce that, when the sanitary surroundings in any locality are good, and every possible agent conducive to good health and long life is used, the life insurance in that locality will be conducted upon a profitable basis. The reverse also holds. Where business is put on the books from unhealthful and unsanitary localities, with all the surroundings detrimental to good health, it only remains to be said that such business is carried at a loss or at a minimum profit.

The question naturally arises: Why so much concern about the welfare of the stockholders? We may rest assured that the premium on all policies are loaded to cover lives in unhealthful territory, also to cover those shortened by the non-observance of the laws of health. This loading is necessary to protect the companies against loss arising from unsanitary surroundings, which would not occur were the policy-holders residing in localities con-

ducive to good health. In other words, a citizenship which permits preventable diseases and unsanitary conditions to exist and death to run rampant, must "pay the freight," not only with the lifeblood of its individual members, but in loss of time and money. Moral: The nearer ideal the sanitary conditions and the nearer perfect the hygienic surroundings the lower will be the death rate maintained, while the losses of life insurance companies will be minimized. There is no doubt that as long as these filthy conditions exist, and as long as preventable diseases go unbridled, just so long will an insuring public pay for its negligence. I say *negligence* because neither municipal or health officers will do very much along sanitary lines unless there exists a popular demand for action.

Educational work must begin with the people. The sanitary officers in most cases already have the education, brains and good judgment to inaugurate and enforce crusades for health betterment; they only need the endorsement and demand of the public. It does seem that, could the insuring public fully realize the excessive amount it pays for life insurance, by reason of existing conditions, there would be a general and permanent move made to eradicate all those nuisances which are known to create disease and death, thereby materially lowering the mortality, thus enabling the life insurance companies to make cheaper rates, also saving time and money now expended on account of sickness. Surely the time for an awakening is at hand which should be welcomed and encouraged by influence, brain and resources.

From a cold business point of view, it is not profitable to life insurance companies to collect an excess for deaths that ought not to occur, but do and will as long as present conditions exist, as it is inevitable that it must be paid out. The longer a policy-holder lives the more he pays; also, the fewer the deaths the greater the profit to the companies; so it can readily be reckoned that the companies are eager for this much-needed reform.

It is a deplorable fact that we pay a heavy penalty for the privilege of living and dying in unhealthful surroundings and ignoring all the laws of health. This I know is a severe arraignment of the intelligence of our people; nevertheless, it is true. Let an agent of a fire insurance company inform you that your premium rate will double if you store explosives in your house, or

install defective electric wiring, and you waste no time in removing the explosive or correcting the wiring. Why should we not be as alert to our physical and financial interests when so notified by those well informed and drilled in laws and measures conducive to good health and long life?

Two large companies in the North growing impatient at the delay of the people and authorities in adjusting these matters, have begun a system of education by mail among their policy-holders. Some companies and fraternal orders have employed nurses to visit the homes of the policy-holders, advising them along hygienic lines; they have also established sanitariums for the benefit of those becoming sick after securing policies. These methods have their limitations, but it is a move in the right direction. It is a notable fact that a few companies refuse to enter our Southern States; others enter, but restrict their operations to certain districts. Evidently there is a reason, and I am constrained to believe that it is not an imaginary one, but is based upon mortality experience tables. I am not unmindful, however, that there has been an improvement in these districts since the mortality tables in question were compiled. Surely our Southland has borne this stigma long enough.

When sanitation and hygiene are taught daily in our schools, when sane health laws are passed and consistently enforced, and when the vast financial savings of such procedure dawns upon the average man, we may expect an awakening, but not till then. It is a well-known fact that when you prove to the average citizen that his pocket-book suffers by any neglect on the part of himself or his State, there is found an early remedy; and if we wish to accomplish much we must make that the basis of our plea. No better proof of this assertion can be found than by drawing a parallel between the amount of money appropriated and expended by our lawmakers for the protection of live stock and agricultural products and the sum devoted to the protection of the health of the people. We cannot believe that they deliberately place the hog above the baby, the sheep above the voter, or the cotton plant above the mother, but must conclude, in all charity, that their attention has never been called to this inconsistency.

Every one who reads the daily papers and current literature has found in almost every issue during the past year interesting in-

formation concerning the conservation of our natural resources, forests, minerals, etc. It was easy for our lawmakers to see why the hand of greed should be stayed and our forests and minerals conserved and appropriations were made for same. How much more important is the conservation of the health of our people, yet we see this set aside for the most trivial legislation. While we give due credit to those philanthropists who are donating from their large private means to the conservation of health, we bow our heads in humiliation that such a course is necessary while we enjoy such a great **and** much-boasted civilization.

We have temporized with sentiment and moral suasion long enough. Let us be "up and doing." Let the unselfish medical profession, with its untiring energy, not only keep up present meritorious tactics, but get immediately at the heart of matters by busying ourselves with those who make and execute our laws, as well as with the individual citizen, making our demands upon an economic basis—a saving of dollars and cents to the commonwealth—and ere long we will hear the rumblings of a popular demand that will reach the desired end. Then our profession will come into its own and reap the reward that a diligent, scientific and sacrificing promoter of good should receive.

One of the greatest factors in bringing about this Utopia must be the organized medical bodies; they should by precept and example, in season and out, educate the people, give publicity to these needed reforms, deliver public addresses and give their expressions to the secular press in **no uncertain terms.**

The press is a powerful agent and it has at all times been willing to open its columns for the dissemination of scientific knowledge for the general betterment of health. The people look to the medical profession (and rightly so) for their knowledge and guidance, and should not be disappointed. Without correct information, sane legislation and wise administration of sanitary and hygienic laws, the people are practically helpless.

It is to be hoped that the medical profession as a united body will not hesitate longer to grasp the situation, but will take immediate action to the end that happiness, health and prosperity may prevail, disease be robbed of its horrors, life extended and death cheated of its untimely prey.

DISCUSSION OF DR. FLORENCE'S PAPER.

DR. B. A. LEDBETTER, New Orleans: There is one most important point which I do think the doctor has not touched upon in regard to Southern conditions, and that is vital statistics. We all know that the South is just as healthy as the Northern and Western States. We all know that there are no States in the Union to-day doing greater work than Texas and Louisiana and Mississippi in regard to health conditions. The great point we want to make to the world and show to the world is that we have a healthy climate and healthy people, but we have absolutely nothing to prove this to the great corporations and also the immigrants flowing into this country from all parts of Europe. Therefore, we get absolutely none of the better class of immigrants in this country. Why? For the reason that we have no statistics to prove the value of our climate; and what we need more than anything else is to furnish this proof to the world by the careful collection of vital statistics, and it is up to the medical profession to take an interest in this matter. We will never have vital statistics until the medical profession goes to the Legislature and asks the different members of the Legislature from all parts of the Southern States to demand it, and then give us a proper law to enforce vital statistics.

DR. D. O. WILLIS, Leesville: I should like to make one point with reference to the securing of vital statistics. It has impressed me forcibly, and that is this: We have active men for health officers throughout the State who are not only active as practitioners, but who are members of local and State societies. These are the men who do the work and take an active interest in these things. We should not have men who are inactive in a general way, who simply practice medicine and pay no attention whatever to anything else. I see no way for us to get such men with the present system of electing or appointing these health officers. The medical profession of the State should wake up and take some steps to secure men who are active and are coworkers with the different societies of the State, and with the State and local societies. At present, under our system, the Police Juries of the different parishes, as you know, appoint the board of health, and these Police Juries take the matter of appointment up in a haphazard way probably, and appoint somebody chairman of the board

of health without knowing about his activity with the profession or his feeling towards his fellow practitioners, and we ought to consider this matter as a body and take some steps to get laws enacted which will enable us to change the present method of appointing health officers.

DR. J. H. FLORENCE, Houston, Texas (closing): The vital statistics question is one of great importance to insurance companies. In Texas we have a law which is all right, but for some reason we cannot get vital statistics. We cannot get the mortality of any disease. While we may get the mortality from any disease, we know it is defective. In one part of the State the deaths from tuberculosis are given completely and accurately; in another part of the State we do not get one-tenth of them. There is no way on earth that I can see to get such statistics. That is one of the greatest problems we have to contend with. I know very little about the laws of Louisiana regarding this matter.

I take this occasion to thank the Louisiana State Medical Society for the courtesies extended to me while in this city, and to say that I have enjoyed your papers and discussions very much.

DR. C. A. GARDINER, Sunset: I rise to second the remarks that were just made in regard to the excellent essay on sanitation. It is unfortunate that the paper was read at this time, when there are so few members present. Since our State Board of Health has taken such a deep interest in this campaign for sanitation, I think the medical profession and every individual in it should lend their co-operation to the excellent work that is being done by our Board to-day, and make it a personal matter, and see to it that the sanitary measures recommended by the Board are carried out so far as it lies in their power in the respective neighborhoods in which they practice.

DR. L. LAZARO, Washington, read a paper entitled:

Sanitation.

Human life in its beginning, its duration and its ending, is the predominant consideration in all personal, social, State and national problems. It is the most valuable asset of the individual and State. The standard of a nation is finally to be measured by

the standing of human lives. The man who, next to Pitt, was probably England's greatest premier, said: "You can take the richest and most beautiful of kingdoms, cover it with temples and palaces, defend it with armies and navies of the most advanced type—do all things else to forward its interests and its glory, and despite all these things, if its people decline in stature and vigor, or its birthrate falls below its mortuary rate, that nation is doomed." Hence, the very highest obligation of statesmanship is public health.

Within the minds and hearts of mankind there has ever been protesting rebellion against that last scene of all—the final struggle between life and death—life's last, greatest and most terrible tragedy. This instinct to live as long as possible has often driven men and women to curious and ridiculous expedients. Ponce de Leon faced death in many forms in his search for the waters of life. Richard the Third, in a moment of danger, spoke these memorable words: "A horse, a horse, my kingdom for a horse," so that he might save his own life. Had he lived in our age I guess he no doubt would have preferred an auto. But, after all, life is really not worth living unless the individual is in good health. We have examples every day where men ruin their health to accumulate wealth, then spend their wealth endeavoring to regain their health.

Before we discuss the preservation of health and the prevention of disease, let us try to have a correct understanding of both terms. Health is harmony between the individual and his surroundings. Disease is lack of such harmony. Now, if we accept this broad definition of health and disease we are bound to realize at once that wild individualism is of greater danger in questions of health preservation than in the affairs of public life, because of the fact that health is regarded by the ordinary individual as a purely personal, rather than a most valuable public asset. It is plain to any thinking person that in the conservation of lands, minerals, waters, forests, fish and game, effort is made to prohibit the individual from taking that which belongs to the public. In the conservation of the State's most valuable asset—public health—our effort must also be directed to prohibiting the individual from giving to the public something which neither he nor it deserves. In other words, restriction of the liberty of a part or unit is necessary to conserve the welfare of the whole.

As long as man was compelled to battle with hosts of enemies, the stings of whose shafts he could feel and whose ravages in his ranks he could realize, but of whose character and location he knew nothing, it was hard, dull and uphill fight, but since the microscope and the science of bacteriology have driven away the surrounding mists and revealed the enemy in plain sight, so that to-day we know just what we might have to battle against—the different germs which invade our bodies and cause different diseases and their exact location, we are on better ground, better armed and better prepared, not only to treat disease, but to prevent it as well. It is only with this knowledge that we can say hygiene is a science; that hygiene is the most neglected and most important of all the sciences. Who can deny its importance, when we are told in words that are true, that its aim is to render growth more perfect, decay less rapid, life more vigorous and happy, and death more remote.

The campaign against all the diseases which attack the human body can be carried on in various ways. The individual cases of disease can be nursed with all the care that can be shown to bring on recovery, suitable drugs may be given, surgical interference resorted to; the individual's peculiarities studied carefully and taken advantage of; in fact, all the resources of up-to-date medicine centered on the state of disturbance and the individual patient. Such treatment has saved in the past and will save in time to come, many, many lives dear to friends and family and of value to our country and race. As a mass method of attacking disease, however, it is palliative and remedial. There is no sane man who would not rather avoid disease than to be healed of a malady, even by the best physician. Measures of prevention fall into two classes—those dealing with the physical well being of resistance of the individual, such as diet, exercise, sleep, fatigue, stimulants and narcotics, and the general efficiency of the functions of the body. Secondly, those which have special reference to environmental conditions or affecting many people or communities. Now, the method which the individual may adopt to ward off disease and develop resistance come under personal hygiene. Those that involve larger and smaller groups of individuals constitute the field of public hygiene or *sanitation*.

PERSONAL HYGIENE.—The methods for the advancement of per-

sonal hygiene must be largely educative in character. The progress here is limited by inherited constitutional factors. In many cases the prevention of disease and early death of an individual is impossible—in other words, some persons carry within themselves the seeds of decay which germinate early and come to fruition in spite of anything that can be done. Some mechanisms can be strengthened, but not remade. I need only mention the high resistance to many infectious diseases possessed by the well-nourished, properly exercised, undrugged person. As I said before, improvement in this field must depend to a large extent on education; therefore, it must necessarily be slow.

PUBLIC HYGIENE.—Here I must say that we cannot draw a distinct line of demarcation between personal hygiene and public hygiene. A stream cannot rise higher than its source. In other words, the welfare of a group is determined by that of the individuals composing it. The strength of a cable depends not only upon a union of many fibers, but also upon the quality of each fiber. The pauper in prison infected with typhoid can infect the whole community. The millionaire in his mansion, with light and fresh air in abundance, may fancy he has nothing to fear from the overcrowded rooms of an unsanitary tenement house located in some alley of the slums, but the connection between these two dwellings is in many ways more direct than he may imagine.

Gradually the concerns of personal hygiene are becoming problems of public hygiene. We all know that cleanliness of body is a personal matter; it would be absurd to-day to legislate for compulsory bathing, and yet we all know the establishment of free public baths is everywhere recognized as an important measure of public sanitation. The same applies to exercise and the municipal parks or playgrounds and gymnasia.

Up to now measures of sanitation have affected the infectious diseases. Of course, it is not possible in all cases to determine the factors that have been operative in the decline of infectious diseases, and in some cases causes we cannot control have been at work; but there is no doubt that measures of quarantine, isolation, school hygiene, etc., adopted by the community, have played a part in the shrinking of once prevalent infectious diseases. We all know beyond a doubt that one of the most remarkable and one of the best understood examples of the efficacy of sanitary features

is given us in the instance of improved public water supply on typhoid.

Now, if we admit the health of the community to be a valuable asset, that the health and physical soundness of a nation are at least as worthy of public concern as the conservation of other natural resources, then the road is wide and clear. We are bound to admit that the public is slow, and, as an example, we will take the imperfect legal crystallization of medical knowledge and the inadequate material and moral support given by most cities to public health officials.

We must get all the information we can before planning our campaigns. We must reduce the death rate of typhoid; we must know about the best methods of preventing or reducing summer mortality among infants; we must devote more time to infant feeding. We must understand the importance of fresh air, which means better ventilation in our homes and more parks in our large towns and cities, pure food, pure water and pure milk. We must guard against the stunting and disastrous results of child labor; really, we are just beginning, but it is plain that the field of public sanitation is widening fast. The time has come, too, when we must consider the interest the whole community has in dangerous trades and occupations. We must, as much as possible and within the bounds of reason, prevent or minimize injury and disease in dangerous trades and occupations; it pays to do so, not only from a humanitarian but from an economic standpoint. The same things applies to the trades involving contact with poisonous substances, like mercury, lead, arsenic, etc.

REMEDY.—Knowing the remedy to be applied is not all; we must find a way to get the people to apply the remedy. In our country the sovereign peoples are the fountain-head of all authority and to get the authority in the form of law and money, which is the sinews of war against disease as well as war against our fellow-men, it is absolutely necessary to go to the fountain-head. In other words, a public health system, like any other arm of the government, must derive its power from where power exists—in a monarchy, from the king; in a democracy, from the people. Of course, those who expect a sudden change, will be disappointed—they will be like Pelias' daughters. An old fable tells us that Pelias' daughters desiring to at once make their aged father young

again, injected young blood in his vein; the result was, naturally, the old blood ran out and the young blood would not stay. So it is with the State; the new and better elements (ideas) must enter the system and gradually drive out the unwholesome particles (old ideas) slowly. The people must be educated up to the new forms, just as they were for centuries brought up to the old. It is contended by some that it is useless to try and convert old people to new ideas on the theory that an old dog cannot be taught new tricks, and that we should go after the children. Oliver Wendell Holmes, however, when asked the question as to what age he considered best to begin the education of children, answered: "One hundred and twenty-five years before birth." So you see you cannot escape educating all the people. I think the time has come when we should realize the importance of cultivating the resisting power of the average American and devoting more time to physical culture at school. In Germany physical culture is the business of the State, which makes it compulsory under certain circumstances in the schools and invariably in the army. The net is so arranged that no one can escape, and as a result the German average is higher than any other country. From the point of view of producing an all-around strong nation, the German system is indisputably better, inasmuch as it ropes all men into its net. We Americans should also devote more time to school hygiene, and here we need trained teachers also. The idea is to produce what we know—education to be perfect must aim at—the development, not of part only, but of the whole individual—moral, intellectual and physical. It is not all to instill knowledge in the brain and purity in the heart, but we must develop the strength of the children also, thus rendering them every day fitter in mind and body and simultaneously increasing their individual worthiness and the nation's patrimony, as they constitute its pride and hope.

It is in the work of educating the masses where we as physicians can assist so much; we can reach the people in our everyday practice, at health conferences, through the press, through medical organization and co-operation between parish, State and nation; at traveling institutes with exhibits, models and charts, as our worthy president of the Board of Health and his assistants are doing now through this State. I believe that every medical

meeting, parish, State or national, should hold one session for the public so they can hear lectures from outsiders. I do not know whether it is based on the stupidity or the wisdom of man, but it is a well known fact nevertheless, that lots of people will heed the advice of a stranger where they would ignore the words of their life-long friends.

After the wisdom and good to be derived from education in sanitation is understood by the public, they will demand that the work of preventing disease and preserving health be *placed in the hands of sanitarians who will devote all of their time to the work and get their pay for such services from the State.* These sanitarians will work under the State and Federal authorities, each department within strict constitutional limits. Suppose each parish had a trained sanitarian with the authority of the State Health Department back of him, and whose permanent residence, office and laboratory, would be at the parish seat instead of on a passing train, and whose business it would be to see that the people got pure food and pure drugs, not occasionally, but every day, and to prevent and check epidemics—why the work of this department would return directly to the people even twenty times the amount in proportion to its cost that is returned by any other department of our Government by its immense saving accomplished in the prevention of disease and the spread of valuable knowledge among the people, preventing a very large proportion of the now prevailing cases of illness. We protect our forests, waterways, fish and game, we protect our cattle, hogs and plants. Why not protect human life? Is it more important to protect the lives of hogs than of children? This and many other contrasts in our present policy will help to emphasize the importance of establishing such a department and giving it as wide a range of activity as possible. Why in New York, I am told, the Health Department has the power of making and enforcing its own laws. Why is it that the public is willing to entrust the making, interpretation and enforcement of all our laws to the legal profession, yet is unwilling to entrust any authority for the regulation of public health to the medical profession? I repeat, however, our health laws must have their origin in the work of an enlightened public opinion, such as can be had only as a result of a campaign of education. Laws are a success or a failure in direct ratio to the

extent to which they are backed by public sentiment. Think of the vast amount of work it will require to make some people understand the relation between individual liberty and the public welfare—to make them understand that effective freedom is built up as much of limitations as of opportunities; that supervision over food and drugs, the enforcement of quarantine, the reporting of contagious diseases and the keeping of vital statistics—which is really the bookkeeping of humanity—in fact, almost all measures for the public welfare which are bitterly decried in some quarters as infringement on the liberty of the individual, when in reality they are for the good and happiness of humanity. Confucius said: “Study the past if you would divine the future,” and this maxim applies with special force to our subject. The final triumph of scientific medicine will be the victories of preventive medicine. We know that the ancient physicians had a very small or no conception of prevention; their time, talents and energies were given in devising ways of curing diseases: they were filled with the Shakespearian idea, “We cannot hold mortality’s strong hand,” and were too willing to admit of the pessimistic precept: “The lot of man—to suffer and die.”—Pope. From the beginning of time the medical profession has always had the welfare and happiness of mankind at heart, but owing to a lack of knowledge concerning the real causes of disease, very little could be expected in the way of prevention. It was bacteriology that explained the mystery and showed the way. The world is full of hero worship, and the ones who have slain the largest number on the fields of battle and have won the greatest victories, are the ones who are immortalized in the pages of history and whose statues fill public halls and public parks. The school child is familiarized with the lives and achievements of Cæsar, Hannibal and Napoleon, but these heroes won their fame, their victories and their glory by sacrificing thousands of lives and causing untold suffering and misery, and all for selfish ends. Peace has its heroes and its victories as well as war. To my way of thinking three of the greatest heroes who ever lived were Pasteur, Lister and Koch. Their names are eminently worthy of being placed in the world’s hall of fame, for “great is the victory without bloodshed.” These men had no selfish motives, no bright uniforms, no flag, no brass bands nor cheering crowd—their victories were won at the bedside and

in the silent laboratories, in bloodless battle with the most stubborn, most dangerous and most bitter enemy of man—disease. Think of the lives saved by vaccination from that loathsome and fatal disease, smallpox. We owe this boon to humanity to the immortal Jenner. Think of the Pasteur treatment for the prevention of hydrophobia and the consequent number of people saved from that horrible death! Think of wound infection—recall the fate of the wounded in the Civil War and the high death rate! How all of this has changed since the light of science has shed its bright rays on the bloody battlefield! We can truly assert that military surgery has reduced itself largely into prevention. In private practice the blessings of aseptic surgery are even greater. Think of the lives saved from that dreadful and fatal disease, puerperal fever; also from typhoid, lockjaw, cholera and bubonic plague, yellow and malarial fevers. Think of the building of the gigantic Panama Canal which will finally result in the wedding of the Atlantic and Pacific. Without the intervention of sanitation the second attempt by Americans would have ended as disastrously as the first under the French. When this new waterway will be opened for the commerce of the world it will not be the President, nor the United States Congress, nor the engineers, but Col. Gorgas who will be entitled to the greeting “Hail! to the chief who in triumph advances!” as without his wise and sanitary intervention the whole scheme would have remained an idle dream. This was indeed a beautiful and fitting illustration of the saying that in the ability to conquer environment lies civilized man’s chief claim to superiority over the animal kingdom.

In conclusion, let us hope that from now on there will be co-operation and co-ordination of all educational factors with the physicians and sanitarians in lifting the reproach of sanitary ignorance which stands as an obstacle to the fullest development of the unlimited and unrivalled resources of our country. It does not behoove us to soothe ourselves with self-praise because of what nature has done for us—we are entitled to no credit for our unexcelled climate, products and resources. It is only the manner in which we are conserving and developing our resources and the degree of health and happiness and liberty we are giving our people that can confer distinction upon our citizenship, raise our standard and fix our place in history.

Orleans Parish Medical Society Proceedings.

President, DR. B. A. LEDBETTER.

Secretary, DR. L. R. DEBUYS.

141 Elk Place, New Orleans.

In Charge of the Publication Committee, DR. L. R. DEBUYS, Chairman.

DR. HOMER DUPUY and DR. W. H. BLOCK.

MEETING OF NOVEMBER 13, 1911.

DISCUSSION OF DR. ELLIOTT'S PAPER.

DR. EUSTIS stated that he was glad of the opportunity of discussing the admirable paper of Dr. Elliott, and was pleased to note that the essayist had mentioned the value of the blood pressure apparatus. He had been using the old Rivau-Rocci since 1903, substituting a Janeway cuff in 1908, and for the past year had been using a Tycos apparatus. In spite of the report of the committee of the Massachusetts General Hospital, composed of Murphy and others, in which it was stated that the apparatus was of limited clinical value, he had continued the routine use of the apparatus, and felt unable to properly treat a cardiac case without the data furnished by a reliable sphygmomanometer. He agreed fully with all treatment advised by Dr. Elliott except as to the restriction of water in these cases. He had always regarded the high blood pressure as of toxic origin, and, where the heart is fully compensated, he believed copious draughts of water should be administered, with a view of diluting the toxins and hastening elimination. Inasmuch as he had observed that the condition was usually associated with a high indican index, he, as Dr. Elliott advised, limited the amount of proteids, even stopping them altogether for a few days. He reported the history of a case in which excellent results had been obtained by this means, and stated that, in his paper before the Southern Medical Association, which he was unable to read, but which would appear in the proceedings, histories of twelve such cases would appear. These were representative of some three hundred cases of high arterial tension

which he had observed during the past eight years. During the past summer Dr. Eustis had been able to raise the blood pressure of dogs from 110 to 260 by the intravenous injection of parahydroxy-phenyl-ethyl-amine, which is formed by putrefaction of tyrosin, one of the normal products of pancreatic digestion. These experimental results strengthened his opinion, based originally upon clinical findings, that high arterial tension is due to a toxemia, most probably of intestinal origin, and that in its treatment low proteid diet, with copious draughts of water, is indicated.

Communications.

MISTAKES IN MEDICAL EDUCATION.

To the Editors of the New Orleans Medical and Surgical Journal:

You were certainly right in presuming that your editorial on "Mistakes in Medical Education" should prove of interest to your readers.

From the fact that both of you are at the head of medical schools—progressive heads, at that—having at heart, in the present, as you had in the past, the betterment of medical education in our state, it is inferred that any view toward that end, from any source or from any angle of sight, acute or obtuse, shall be welcome. Hence, the following contribution of modern historical data and comments on the subject, "Mistakes in Medical Education." *Homo sum; humani nihil a me alienum puto* (I am a man, and deem nothing that relates to man a matter of indifference to me). The remarkable address of Dr. Dudley Tait, referred to in your editorial, is almost a *verbatim* echo of the protest against mistakes in medical education in France, which already resulted in many improvements, the main point being won, namely, that the hospital be the all-around training school for the "ordinary student who is destined to become a general practitioner."

HE was dissatisfied with his constitutional right to visit the wards, to look on or peep into cases, only to read, "Hands off." HE grew neurasthenic on excessive feeding of psittacic recitation, didactic lectures and laboratory refinements, which exacted more and more of his time. He craved for more clinical work at the

bedside, with plain teachers close to him, a corps of demonstrators. HE wanted not only to look on cases; HE wanted to touch cases, and HE wanted not only to take some interest in cases, but to take some honest responsibility, as it were, in common with his chief, in cases. That was training him for his future life-work.

The climax of discontent came when some ultra scientific professor proposed two kinds of M. D. diplomas—the inferior, entitling to practice for plain graduates; the superior, for scientific graduates. This unfortunate division of classes in probably the most democratic body of men, namely, the medical profession, created a vivacious scene. Bouquets of the most luxuriant vegetables were unceremoniously placed at the feet of unpopular lecturers, termed unpatriotic by resolutions from the allied associations of practitioners and medical students. Feeling was intense, the question vital. Politics blew hard on the flame.

Think that hardly one hundred years prior, in 1817, the patriotic student body of German universities, the Burschenschaft's protest culminated in Sand's assault upon the poet Kotzelene at Mannheim. To-day, the youth of a big university won with bouquets, when the civilian plebs still resort to unchaste eggs of theatrical and political flavor.

The hospital, first. *That is the question.* The hospital, well managed, well equipped, to become both the academic and the training school for practitioners, with increased benefit to its really humane and really charitable objectives.

Teaching, second. *That is the question.* Clinical teaching in the main, during the whole curriculum, with *selected scientific teaching* toward allowing the future practitioner to understand and interpret laboratory reports, but not to allow him to make reports. Scientific laboratory work, with its exacting technic for diagnostic purposes, for research or advancement of knowledge, is not within the "possibilities" in the practitioner's work. All of the really scientific branches of medicine are entirely separate from the art of practice, which exacts so much time itself. Scientific work is an open field for the most gifted, the most ambitious students. They *can* give to it their whole soul and time without losing either one, while the ordinary student and practitioner shall look to them with reverence and hopefulness.

The ordinary moulding of a medical school graduate will turn out useful practitioners, and shall not turn down or extinguish

any originality of a genial mind. It never did, it never can do it. See America's beautiful record in that respect.

Teaching in the hospital clinics and in the medical school laboratory should be open to all; let every one select the course adjusted to his mental and physical capacities, and, besides, to the size of his pocketbook.

Summing up, the question is to curb tendencies in some universities to spend too much time in semi-scientific exercises, with small profit for the ordinary student's destination.

The remark of some ultra-scientific pedagogue, that the M. D. ought to be somewhat better equipped than a trained nurse, is a slur and no argument, reflecting on the substantial, practical intelligence of the ordinary student who, from his anterior academic course and love for learning, should always maintain himself above the trained nurse, or he does not last long, giving up practice altogether, quite often dropping on the wayside dead as an M. D., dropping in the army of salvation of quacks.

It is said that when Napoleon I, in 1806, completed, by the founding of the university, the reorganization of education which he had commenced during his Consulate in 1802, his main idea was to help the average man, to make of him a useful man: "*pour sauver les médiocres; en faire des hommes utiles.*"

The object of this wonderful, practical genius, at any rate, the type of the modern self-made man with executive ability, was defeated, the university, in course of time, becoming the nursery of "*lettrés*" and "*savants*," where all privileges were denied the average man for his intent and purport in life, the able, the strong, the gifted, the genial forgetting that the other average fellow existed. Hence, the protest alluded to.

Napoleon's concept of the university, a group of technical schools in all departments, should prevail. So, the ideal of a university medical department is to operate: thoroughly organized hospital clinics, medical men and surgical; Cabot's method of case teaching in the class-room instead of recitations, practical work in the dissecting-room and laboratories for practitioners' preparation, research work open to those capable of it.

Whenever and wherever a medical college can carry through and TRUE such a plan as that, it must necessarily produce well-trained practitioners and real scientists, and the State Board of

Medical Examiners must necessarily, more than ever, form a useful adjunct of medical education to eliminate the misfit, the dullard, the intruder. But, to efficiently perform such a serious task, its ideal must be to change its tests, in the main giving much less play to memory and psittacism tests.

This purification process of the medical profession by proper education is certainly slow and costly. It may be a chimera in the mind of some, but most of us believe it to be the surest process for curing the great majority of vascillant and apprehensive laymen of their mania for irregular practices of all kinds.

Respectfully,

DR. E. M. DUPAQUIER.

Miscellany.

THE MEDICAL TREATMENT OF HYPERACIDITY.—Roubitschek (*Deutsch. Med. Woch.*, 1911, xxxvii, 874) advocates hydrogen peroxid in cases of indigestion due to hyperacidity. Roubitschek found that fluid preparations were much more satisfactory than the solid preparations that are recommended by some. He first gives about 300 c. c of a one-half per cent. solution three times a day before meals. If no result is obtained from this, the strength of the solution is increased to three-quarters or one per cent. The disadvantage of the stronger solutions is that they are apt to cause vomiting, and solutions stronger than one per cent. are almost sure to do this. The results were extremely good in eighty per cent. of the cases treated. The average length of treatment was fourteen days. The permanent results achieved by this method of treatment are somewhat obscured by the fact that the patients were only under observation for a period of three months after the treatment. However, during this time the patients remained free from symptoms, and Roubitschek cites a case reported by Poly, who was perfectly well one and a half years after treatment.—J. A. S.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

The Toll of the Year.

Every year some nestor of the medical profession goes to his reward, but the past year has demanded a larger toll than usual. Our own loss, in the late Stanford E. Chaillé, brings the story of the mortality near to us—but in other centers the reaper has had a wider swath. In Boston, Bowditch, Brinkerhoff and Dwight have passed away. In New York, Frank Foster, of the *New York Medical Journal*; Christian Herter, of the Rockefeller Institute; Jane-way, Dean of the University and Bellevue Hospital Medical College, and a noted internist; Hermann Knapp, one of the first and one of the greatest ophthalmologists in America; Pilcher, a noted surgeon—all have died in the year. In Philadelphia the call has come to Aloysius Kelly, the diagnostician, and Joseph Price, the gynecologist. Among others may be named Laertus Connor, Alexander Ferguson, Henry Gibbons, Dean of the Cooper Medical College, Henry Gradle, W. M. Mayo, father of the Mayo brothers, Charles A. Oliver, and William Warren Potter.

The foreign roll is no less distinguished: Joseph Bell, for years an eminent educator at Edinburgh; Sir Rupert Boyce, one of the pioneers in the promotion of the study of tropical medicine and the founder of the Liverpool School; Dieulafoy, remembered among the distinguished French diagnosticians of the past century; Pavy, the physician; Hermann Senator, who had more hearers than any other clinical teacher at the University of Berlin; Remak, the German neurologist.

Each of these, at home and abroad, has left his mark upon the highway in the progress of medical science, so that for all time, in one way or at one time or another, some one will stop to read his epitaph and sound the worthy "well done."

It is wise, at the waning and waxing of the years, to stop and

look back at what has been done by the great men of our world—those who have made our future achievements possible. All of these who have gone before have been soldiers in the cause of a high calling, and their reward should be the greater because they have fallen, often, as sacrifices to the same cause.

The year which has past has been variously eventful, and in no other field more than in preventive medicine. The combat with the plague in China; the struggle against the invasion by cholera in our land; the internal problems with the diseases of infectious parasitic types—have all prepared us for a further struggle upward and onward. The near future promises the solution of poliomyelitis, of pellagra, and, if Bass' work is proven, the militant evils of malaria may vanish before the evolution of its natural enemies.

Sanitation and domestic hygiene are household studies now, and the public is becoming interested in its own salvation.

The struggle with the education of the tuberculous is growing more and more potent, and the results are evident, already.

The vaccination against typhoid is established since the experience of our army battalion in Texas, and soon the routine protection of children will become as common as against smallpox. There may even emerge from the mass of experimentation a polyvalent vaccin which will at one stroke dissipate all infectious diseases by a wholesale immunization—*chi lo sa?*

Meanwhile the enormous tax upon human ingenuity to keep pace with the inevitable progress compels the weak to fall by the wayside, and in the economic plan of the universe the submerged must die that those on top may live. Mine disasters, cataclysms, rebellions, famines, and the accidents of travel satisfy the need of a discounted population in the world in order that there may be still room for the fittest, who may survive.

With our distinguished dead, those others have gone, too, in the past year, victims of the great Unrest, in which they have had no requiem beyond that which the loving ones may have murmured in the silences; but still the toll must be, and with each year the list must be drawn for the sake of the survivors living on for another year or more in their needed usefulness.

Our sermonizing may not be cheerful, but is it reflective, and may aid some of our readers all the more to strive for a prosperous

and for a Happy New Year, which is within the reach of all who clearly see the way.

The Personnel Bill for the P. H. and M. H. S.

It is to be hoped that the National Congress will act favorably upon the "Personnel Bill" now before the House of Representatives, in which a rational and adequate compensation for the services of the surgeons of varying ranks in the U. S. P. H. and M. H. S. is provided. In this bill it is contemplated to raise the salaries of officers in this service to the same amounts as those of medical officers in the Army and Navy holding equal rank.

The regulations in Government services requiring periodical examinations of medical officers make the efficiency of the medical staff certain, whether in the Army and Navy or in the M. H. S. For scientific work, the M. H. S. actually offers more inducement than the Navy, or possibly even the Army, but with present differences in salaries referred to the several ranks there is discrimination against the M. H. S. and in favor of the Army and Navy.

The Personnel Bill has nothing to do with either the Mann Bill or the Owen Bill, and it is heartily endorsed by the whole M. H. S. staff.

The apathetic attitude of the medical men in the M. H. S. towards the Owen Bill has created some antagonism to the service, but in this case there can be no animus on any side other than that the men in the Government employ should be paid enough to allow them to live decently.

The attractiveness of civilian life and the opportunities for successful practise have already occasioned many resignations from the U. S. P. H. and M. H. Service, and this will go on advertising, the while, that the men in the service are underpaid.

The Army Canteen.

We previously have referred to the much-agitated question of the army canteen, as officially regulated in 1889 and abandoned in 1901. Now that a bill for its re-establishment is actually pending before Congress, it may be well to recall the facts of the case in

order that our readers may be able to form an intelligent opinion as to the merits of the bill.

The canteen consisted of rooms set apart for recreation, such as gymnasium, billiards and other games, sometimes even a piano. Gambling therein was forbidden. Ardent spirits and wines were prohibited, but the sale of light beer by the drink was permitted on each week-day in a room or building set apart for that purpose. Limited credit was allowed to soldiers in good standing, and profits were added to the "company funds" to contribute towards extra luxuries for the members.

In other words, the canteen was not a bar, as is the common opinion, but a club for the soldiers, thus giving the men the opportunity of obtaining a mild beverage in reasonable quantity at home instead of having to patronize uncontrolled resorts outside the limits where strong intoxicants are to be had to the extent of funds on hand or prospective.

A petition, largely signed by medical teachers and hospital men from different parts of the country, has been sent to the Committee on Military Affairs of the House, to which the bill has been referred. It urges the passage of the re-establishment act (House Bill No. 30), on the ground that it will greatly promote temperance and efficiency in the Army; that it will reduce the prevalence of venereal diseases, which is now terrible and increasing, and that, as it will not only protect the health and lives of the soldiers, but of their present or future wives and children as well, it is of great importance to the whole nation.

Those of our readers who believe as do the committee are requested to write in favor of the bill to their Senators and Representatives. Mr. John T. Watkins, of Louisiana, is a member of the Committee on Military Affairs of the Sixty-second Congress.

New Editor of the New York Medical Journal.

Our friend, Dr. Charles E. de M. Sajous, has been recently appointed supervising editor of the *New York Medical Journal*. A brilliant and experienced writer, his services should be of great value to the *Journal*, which should be congratulated upon this notable acquisition.

After graduating from the Jefferson Medical College and serving

as resident physician in the Howard Hospital and occupying some minor professorships. Dr. Sajous spent several years in Europe doing original research work. The practical result of these studies was the publication of his volumes on "Internal Secretions and the Principles of Medicine." These and his "Annual of the Universal Medical Sciences," together with its existing successor, the "Cyclopedia of Practical Medicine," are his main achievements.

Dr. Sajous will henceforth limit his practice to consultation work, but continue his teaching. We offer our good wishes on the occasion of his entrance in a new field.

Abstracts, Extracts and Miscellany.

Department of Internal Medicine.

In Charge of DR. E. M. DUPAQUIER, New Orleans.

PRACTITIONER'S NOTE.—The trouble we meet when using antithermic drugs, for instance, the hectic fever of advanced tuberculosis, not in the fever of tuberculinization, in some cases of typhoid fever, in la grippe, acute polyarticular rheumatism, etc., is that, in the great majority of cases, these drugs produce ill effects, such as digestive disorders, exanthemata, sweating, cyanosis, and sometimes collapse.

Any antithermic drug that can save us this trouble ought to be welcome. Cryogenin, the benzoamido semicarbozide, will do it, and the writer recommends it after a fair trial. It produces none of the ill effects mentioned above. Cryogenin is not a new fad. The writer has known it to exist since 1904.

Cryogenin means that which "produces cold"; in other words, that lowers temperature. The dose is from 0.50 to 1.50 grams in konseals, shortly before the febrile paroxysm. Two grams daily can be taken. The writer prefers giving it in an alcoholic solution (brandy, whisky).

Minor ailments such as we see are embarrassing. I take for instance, lumbago (so-called), pains in leg, and fainting spells in youth at the age of puberty. Among the many, many causes for

such, no wonder we get lost and miss the bull's eye. For the two first ailments, far from being minor at times, I cannot refrain from citing the own words of Cabot in his great book, differential diagnosis: "The diagnosis of rheumatism must be avoided like a blasphemy unless we are forced to it by exclusion of all other possibilities." And, then, the great teacher invites turning our attention to the other "*possibilities*." And they are not a few. Surely not. Where, I pray, is the baggage of the youngster in medicine, worth much, when all he knows is to use the word "rheumatism" for things he does not know in medicine.

Now, I wish to call upon all your earnestness to make out what these frequent fainting spells in growing youth mean, chiefly among big boys and girls going to school. It is so often connected with a hurried breakfast and a bath on top, hurrying to school not to be tardy, and there comes a knock in the head, swimming, pallor, syncope, total loss of consciousness, no vomiting, no nausea. The thing lasts perhaps just a minute or two! What is the matter here? as the great Jenner used to ask himself. In no instance, in practice, is there a greater obligation unto you to dig into the family history. Heredity is of value here, and it would not be amiss for you to relearn and rememorize in what diseases is a family history of value. Of all the inherited deficiencies those of the nervous system, motor apparatus, circulatory apparatus, skin, and much less tumors, cancer mainly, as you wrongly believe with so many, *the nervous impression is the most common*. Hence, with epilepsy in the family, one or two generations back, alcoholism in direct ascendants, much less than syphilis, would explain the fainting spells, which are no more nor less than epilepsy. Thus, we are led to consider as minor ailments, cases apparently minor, which are most serious, and possibly practically curable, or that can be arrested, when properly recognized. For this, some chapters of general pathology need be read and re-read, more so than the picture of a typical case in the textbook.

Department of Therapeutics and Pharmacology.

In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

TREATMENT OF PNEUMONIA.—Thomson (*Medical Record*, April 1, 1911) believes that we have reason to hope that success may come from the new science of specific vaccin therapy. The more one sees of this recent recourse against microbic infections the more one feels convinced that its discovery is to mark a great era in medicine. Against pneumonia it has not yet proved generally successful, but this is not to be wondered at, considering our imperfect knowledge as yet both of the principles and practical applications of this new branch of therapeutics.

But, while waiting for such specific measures, we can do much by symptomatic treatment. One great indication is to supply the patient with all the fresh air possible. Whether the good effects here are due to the unfavorable action of oxygen on the growth of the pneumococcus itself, or to the property of oxygen to strengthen muscular function is uncertain. Huxley calculated that a man would be able to move Newgate prison if he could breathe like a flea from every part of his body instead of only through the lungs. Probably both these elements are operative. Certain it is that the chances of a pneumonia patient are better if his couch can be out in a tent on the hospital's roof than down in its wards.

Another indication is to avoid as far as can be, all bodily movement. In no acute disease is removal to a hospital over the rough street pavement so often fatal. The writer does not allow a pneumonia patient to sit up for examination. He has often seen the lips become blue, he states, on merely turning the body from one side to the other, and when this has to be done it should be as gently as possible. All this is unlike the experience with typhoid fever, when delirious patients in the third or even in the fourth week may be moved without injury.

The best stimulant for heart failure in pneumonia, as well as in other conditions, is camphor given hypodermically in half-gram ($7\frac{1}{2}$ grains) [A very large dose.—Ed.] dissolved in a syringeful of sterilized olive or almond oil, and which can be repeated in two hours if necessary. Strychnin is much inferior to camphor for this purpose. Some physicians are now giving cam-

phor hypodermically in doses two or three times greater than as above recommended.

In many cases the onset of pneumonia is accompanied by severe pleuritic pain. This causes the breathing to be very hurried, short and shallow, and for a time the aspect of the patient is that of serious shock. At this juncture a single dose of one-fourth or one-half of a grain of morphin given hypodermically over the seat of the pain, is of great service.

A different condition sometimes occurs at this early stage, which is not treated as successfully as it was in the days of our forefathers. That condition is one of rapid congestion of the right ventricle, with suffocative dyspnea. Because this state is promptly relieved by venesection, much more so than by leeches or by wet cupping, our predecessors were led to bleed in pneumonia as a routine practice through the whole course of the complaint. This was a serious error, but the fact remains that nothing so soothes the patient and improves the subsequent conditions as a single venesection when the signs above indicate it.

After an experience of half a century in the treatment of pneumonia, and after trying a great variety of remedies, the author asserts he came in time to the belief that it did not make much difference what we used or did not use. Patients recovered or died just the same as they did a hundred years ago. But during the past decade he has had reason to change his mind, as both in his hospital and in consultation practice, including two severe epidemics of pneumonia, he has had a greater percentage of recoveries than before, due, he supposes, to the effect of one drug, which, among other effects, changes the course of the fever so that in 70 per cent. it ends by lysis instead of by crisis. That drug is creosote carbonate in 15 grain doses, given every 2 or 3 hours, in a specially prepared emulsion, which is so well borne by the stomach that he has known it to stay down when everything else was rejected. The extreme susceptibility of the pneumococcus to the faintest trace of carbolic acid may allow of this preparation being regarded as a true blood germicide. The writer has seen no injurious effect produced by it, even when its absorption causes the urine to become dark. The formula for this emulsion is:

R Gum acaciæ..... ʒiv
 Aquæ..... fʒiivss
 Ft. mucilag. tunc. Adde.
 Creosoti carbonati ʒv, mxx.

M. et adde:
Glycerin ℥j.
Aq. menth. pip., q. s. ad ℥viij.

S: Tablespoonful (15 grains creosote carbonate) every 2 or 3 hours.

This is also the favorite prescription of the author for pulmonary pthisis, not that he expects it to be operative against the tubercle bacillus, but against the pyogenic micro-organisms whose alliance with the tubercle bacilli in the lungs is so disastrous.—J. A.S.

TREATMENT OF COLITIS.—Hutchinson, in the *Clinical Journal* of May 3, 1911, has this to say as to the medical treatment of colitis. As Dr. Hale White has pointed out, one of the chief objects of treatment in colitis is to keep the bowels empty, and this will often necessitate the use of aperient drugs. It is chiefly, of course, in cases of colitis associated with constipation that such drugs are indicated, but even in the diarrheal types they are often of service. Thus, at the outset of a case of acute colitis, an initial dose of castor oil may be required to empty the colon, and in the more chronic catarrhal case, where irritation is being set up by scybalæ, the same agent is of value. Even in chronic ulcerative cases aperients may be useful, as, for instance, the sulphates in cases of asylum dysentery. In the mucomembranous type aperients are almost a necessity, and it is important to select the least irritating kinds. Of these the writer agrees with Dr. Hale White, that none is better than castor oil if the patient can take it, and next to it he would place an infusion of senna pods. Aloetic aperients are too irritating and the salines too depressing. Liquid cascara is often useful, but has to be used with caution. That the diet in this type of the disease should be rich in fat is sound enough in theory, but in practice it is often difficult to make it so, owing to enfeebled digestive power, whilst the lubricating effect of the fats is better achieved by the administration of petroleum. Petroleum acts both as a protective lubricant and as a laxative.

The routine use of astringents in case of colitis associated with diarrhea is strongly to be deprecated. It is easy enough by their means to suppress the diarrhea, but, by so doing, one offends against the cardinal principle of keeping the colon empty and toxic symptoms are often increased. In the chronic catarrhal type, however, astringents are sometimes helpful, and may be given in the form of sulphocarbolate of zinc or large doses of bismuth.

Sedatives, like astringents, are of limited value. Small doses of opium, however, may be necessary for the relief of tenesmus in acute cases, or when there is a tendency for the bowels to act so soon as food enters the stomach, as sometimes happens in the more chronic cases. In combination with castor oil it is often very useful in the acute catarrhal form. For the griping pain which is so often met with in mucomembranous colitis, and which is probably due to enterospasm, the author has found belladonna the best sedative; it may be used in the form of the extract used in a pill.

Of antiseptics the author states he has a poor opinion, and doubts very much whether it is possible to produce real antiseptic effects in the colon by any of the drugs commonly used with that object (salol, beta-naphthol, cyllin, etc.), and equally doubts whether any great benefit would accrue if one could. An exception must be made, however, in favor of calomel, which is sometimes classed as an "intestinal antiseptic," and which is of the greatest value in minimal doses (1-20 to 1-6 grain), frequently repeated. It should be used as an aperient.

Ipecacuanha is the only specific remedy which is of use in colitis. In the ulcerative type, due to chronic or relapsing dysentery, the writer asserts he has sometimes found it, when given in massive doses, to exercise a specific curative effect, and would suggest that it deserves a wider trial in cases of the sort met with in this country than it has yet received.

Intestinal injections play a large part in the treatment of all forms of colitis, and for convenience they may be divided into three classes:

Sedative. Starch and opium injections are of use in the relief of pain and tenesmus, in the same type of case as opium given by the mouth. In the mucomembranous form injections of warm olive oil have a valuable sedative effect in the relief of griping pain in the sigmoid region which is often so troublesome.

Cleansing. Larger injections are of use for cleansing purposes in all chronic forms of colitis. Normal salt solution is, in the opinion of the author, the best for the purpose. Antiseptic injections are of doubtful advantage, and may even be dangerous. In the mucomembranous form the high injections administered at Plombieres, Chatel Guyon, Harrogate, and elsewhere, are of un-

doubted utility; but the writer has nothing to add in this respect to what has already been said by Dr. Hale White.

Astringent. In chronic ulcerative and catarrhal colitis astringent injections are often of value on account of their local action on the mucous membrane of the bowel. Weak nitrate of silver, argyrol or protargol solution is the best for the purpose.

In regard to all forms of injections in the treatment of colitis, however, certain limitations must be borne in mind. They are chiefly of use when the lower part of the colon is alone or principally affected by disease, for one can never be sure of their reaching high up. It is easily possible, also, to abuse the cleansing injections and induce over-distension of the bowel, and in the ulcerative cases there is a distinct danger of producing perforation unless great care be exercised in their administration.—J. A. S.

THE TREATMENT OF CANCER WITH BODY FLUIDS AND CANCEROUS ASCITIC FLUID.—Risley (*Jour. Amer. Med. Assoc.*, 1911, lvi., 1383) reports the work done at the Massachusetts General Hospital on the treatment of inoperable cancer with various normal and abnormal body fluids and with cancerous ascitic fluid. Forty-five patients were treated with ascitic fluids obtained from patients suffering from cancer. An effort was made to obtain ascitic fluid from patients resistant to their disease, with the idea that the amount of antibodies in these cases would be larger than in very active or non-resistant cases. A second smaller group of cancer patients was treated with various normal and abnormal body fluids for purpose of control. Finally, untreated patients were observed coincidentally for the purpose of comparison with the treated cases. Risley gives briefly the definite result witnessed in this series of cases. In five cases there was a decrease in, or absolute abolition of, the pain previously complained of. Increase in pain was experienced in two cases. In three cases there was a decided increase in the discharge from an ulcerated surface and a breaking down of cancerous tissue, considerable portions of which sloughed away entirely—enough to cause a moderate hemorrhage. Moderate increase in the discharge from an ulcerated surface has been noticed in practically every patient treated. This, in some cases, was only temporary, but was followed later by a noticeable cleaning-up of the ulcer and more healthy granulations. Cessation of bleeding in several cases of uterine cancer was seen. There was an apparent

retardation of the growth in eight cases for periods of two to five months, and in three others for a period of over one month. Twelve patients have remained in excellent general physical condition, gaining strength and weight in spite of a slowly growing process. On the other hand, in no case was there actual shrinking in the size of the tumor, and in two cases there seems to have been a decided increase in the rate of the growth of the tumor. In no instance was any marked harm done. A local and constitutional reaction has occurred more often than from the injection of fluids from resistant cases, and this fact seems to indicate that their action is more specific. Risley draws the following conclusions, based on a careful analysis of the results in this series: (1) The various transudates and exudates of the body, cancerous and non-cancerous, have no effect in retarding the growth of cancer in mice. (2) The use of cancerous ascitic fluid from patients in the active or even moderately resistant stages of the disease, has no permanent effect in preventing or checking the growth of cancer, or permanently benefitting the cancer patient. (3) The other non-cancerous body fluids are even more inert. (4) Temporary beneficial effects may be noticed for periods of one to five months, but the course of the disease is in no way permanently retarded. (5) Temporary relief from pain, especially in uterine cases, and in other cases in which large doses can be given, and retardation of the growth for periods varying from 1 to 5 months, may be expected in a small per cent. of the cases. (6) Noticeable benefit in the general physical condition has resulted in one patient with cancer of the ovary by the injection of her own fluid.—J. A. S.

THE TREATMENT OF RHEUMATIC DISEASES WITH VACCINS.—Ball (*Brit. Med. Jour.* 1911, 2628, 1105) reports in detail a few cases of rheumatoid arthritis that were favorably influenced by the use of streptococcus vaccins. Ball was impressed by the peculiar sapremic appearance of chronic rheumatic cases, and in some of them it was possible to trace in the history the onset of a disease following on some distinct infection, or subsequent to a chronic suppuration. He believes, from experience with a large number of cases, that the focus of infection can at times be ascertained, and, although a few are probably due to specific microorganism, many cases are due to a general sapremia following from a localized seat of infection. He has seen many cases where the focus of

infection has been found microscopically to contain chiefly streptococci. In some cases even, where no seat of infection, such as bad teeth, leucorrhea, intestinal putrefaction, and colitis, could be found, he has used the antistreptococcic serum with success. So many of these cases responded with such remarkable results that he thinks their use is justified in all doubtful cases. Even in a case of acute articular rheumatism following an attack of gonorrhea, with subsequent gleet, he has had success by the employment of antistreptococcic vaccins, where the injection of gonorrheal vaccins had failed.—J. A. S.

DRUGS IN GASTRIC THERAPEUTICS.—Weinstein (*Medical Record*, April 29, 1911), says of the alkalies, that there are chiefly four: sodium carbonate and bicarbonate, magnesium oxide, also called calcined magnesia or magnesia usta, and ammonium magnesium phosphate. The effect of alkalies on gastric secretions is that, given before meals, they stimulate the gastric secretions, while given after meals, when the stomach contents are acid, they neutralize the acidity of the stomach. As to their power of stimulating gastric secretions not all observers agree; but all agree on the antacid properties of the alkalies. The antacid property renders the alkalies of very service in hyperacidity, hypersecretion, Reichmann's disease, and also in ulcer and duodenal ulcer, which are always attended by hyperacidity. Of the alkaline preparations the magnesium oxide is the best. It neutralizes four times as much acid as sodium bicarbonate. It has also very marked laxative properties, and, since most patients that are affected with hyperacid conditions suffer also from constipation, this drug makes it the antacid of choice. Its dose is 15 grains to about 1 dram, the dosage depending on the degree of the hyperacidity, to be given about one hour after meals in a little water. Where there is a tendency to diarrhea, calcined magnesia is contraindicated.

As to the time of administration of the antacids, the height of digestion, about one hour after meals, is the proper time. It is better, however, to be guided in this respect by the sensations of the patient, and instruct him to take it immediately before the impending symptoms, such as heart burn, etc., come on. It must be borne in mind, however, that heartburn, sour eructations, etc., do not always imply a hyperacid state. These symptoms are often present in subacid and even in antacid states, the reason being

that in such conditions the mucosa of the stomach is often in a state of hyperesthesia and is most sensitive to the least irritation by an acid. The ingestion by such a patient of any acid, such as even a small dose of hydrochloric acid, lemonade, or vinegar, causes intense suffering. Moreover, antacid stomachs often contain large quantities of organic acids, such as lactic, butyric, and acetic acids, which act as irritants and give rise to pyrosis, sour eructations, belching, etc.

Bicarbonate of soda is very extensively used as an antacid. In its alkalizing powers it is four times less potent than the magnesium oxide. Sodium bicarbonate has no effect on the bowels. Its dose is from 15 grains to 2 drachms, to be taken in water. Another disadvantage of this drug is that in neutralizing acids it liberates carbonic acid gas, while magnesium oxide does not do this.

Ammonium magnesium phosphate is also a good antacid. It neutralizes twice as much acid as bicarbonate of soda. The dose is 15 grains to one and a half drachms. The sodium carbonate is less efficient than the others, being to a slight degree irritating to the gastrointestinal mucosa.

There is one important drawback to the antacid properties of the alkalies—namely, that, while they neutralize at the moment of their administration the acidity of the gastric glands, later, however, the stomach responds with a reactionary secretion, and in about 45 minutes the acidity is greater than before. This is very unfortunate, and there is only one way to counteract it, and that is by combining the antacid with the extract of belladonna, about $\frac{1}{4}$ -grain to the dose, or with atropin with 1/000 grain, which checks the reactionary hypersecretion. In some cases we do well by making combinations of the various antacids. Another important property of the alkalies is their ability to dissolve mucus. In chronic gastritis, in which the mucous membrane of the stomach is covered with a layer of mucus, they serve a very useful purpose. The patient is told to put a teaspoonful of bicarbonate of soda in a tumbler of water and to drink it on an empty stomach. The patient shakes himself vigorously from time to time, and must not ingest his breakfast for an hour. This is a form of autolavage. Bicarbonate of soda serves also a most useful purpose as an addition to the wash water when we wash a stomach for chronic gastritis. It helps to dissolve the mucus.—J. A. S.

NERVE RECURRENCES AS A RESULT OF SALVARSAN THERAPY.—Benario (*Munch med. Woch.*, 1911, lviii, 732) has collected from the literature 126 cases of symptoms referable to the cranial nerves that have occurred in at least 1,400 cases of syphilis treated with salvarsan. Of these 126 cases he excludes 8 cases of latent syphilis, tertiary syphilis, or parasymphylis. Of the remaining 118, 5 patients were in the first stages, 22 in the combined primary and secondary stages, 82 in the secondary, and 9 not accurately classified, but very probably secondary. Benario thinks that the small number of nerve recurrences occurring in primary affections, compared with the total number of nerve recurrences, shows that salvarsan does not appear to be the cause of the recurrences. This is especially true because the number of primary affections treated with salvarsan is evidently very great. The nerves effected were the optic, oculomotor, trochlear, trigeminus, abducens, facial and auditory. In 30 cases, or 26.1 per cent., the recurrence occurred in the first month after the injection; in 46 cases, or 40 per cent. in the second month; in 27 cases, or 23.5 per cent. in the third month; and in 8 cases, or 7 per cent. in the fourth month. Benario believes that these nerve recurrences are not due to a toxic action of salvarsan, but are clinical symptoms of a swelling induced by the pathological process. He gives the following reasons for this belief: (1) The intervals between the injections and the onset of the nerve manifestations is considerable. (2) The cause of the recurrence seems to be an irritation or inflammation of the nerve, as is particularly shown in the affections of the optic nerve. On the contrary, other arsenical preparations seem to cause an atrophic condition of the nerves. (3) The recurrences seem to appear almost exclusively during a certain period of syphilis. (4) Such recurrences have not been observed in non-specific diseases treated with salvarsan. (5) These recurrences are cured by specific treatment, particularly by renewed treatment of salvarsan. (6) The recurrences appeared in most cases after the smaller doses of salvarsan. (7) These same symptoms have been observed under mercurial treatment. Benario found that certain groups of specific disease were more prone to nerve manifestations. These recurrences occur mostly in the recent secondary stage. Certain specific lesions seem more inclined to result in nerve recurrences than others. Benario observed that chancres about the head were particularly

inclined to do so. Such initial lesions seem to institute a more severe variety of syphilis, and the closer relation between the initial lesion and the central nervous system may be an important factor in the production of these recurrences. He also noticed that nerve symptoms occurred more often in cases with the marked skin eruptions, especially of the papular variety. Patients with headache were also more prone to nervous recurrences. Therefore, he advocates that these groups of cases should have a more intensive treatment with salvarsan as a prophylactic measure. Alcohol and tobacco should be forbidden after salvarsan therapy, because alcohol and tobacco habitues are more prone to nerve affection in syphilis. Certain prodromal symptoms may indicate a nerve recurrence, such as headache, dizziness, ringing in the ears, or some disturbances with visions and patients should be instructed to report for further treatment in the advent of any such symptom. Benario adds that these nerve recurrences have been more carefully noted since salvarsan therapy, but that probably they have occurred as frequently under former methods of treatment. He supports this view by some statistics—J. A. S.

Miscellany.

DISEASED CHILDREN.—A weak, sickly child is indeed a sad sight. The putty complexion, the lack-luster eyes, the thin hands, arms and legs, and the weary look, makes our hearts bleed. But why is the diseased child? How came it to be diseased? Have the sins of the father descended? If they have, why is he not arrested and punished? If he were to slowly poison the child with a poison bought at the drug store, he would be promptly arrested and punished. What is the difference? Ask the child which poisoning he prefers. He will certainly tell you when he has suffered and salved his sores for a few years, that arsenic poisoning is preferable to blood poisoning. Why does not society class as disgraced him who bears hereditary poison in his blood, having wickedly put it there? And what a strange, inconsistent thing is society, any how. It has one standard of morals for women and another for men. And, so long as this condition prevails, so long will the blood sins of husbands descend upon their wives and children. In the Orphans' Home at

Indianapolis, and seventeen innocent children, all suffering from the hereditary malady which is worse than leprosy. They cannot develop into strong, useful members of society. The disease prevents. They will be a burden to themselves and to the State all their lives, and possibly produce more like themselves. Why does society permit such conditions? We strive to prevent fire, for it destroys property. Why not strive to prevent fire (disease) that burns up human beings? Is it our high intelligence which keeps us silent and inactive in this matter?

The law should require the prompt reporting of cases of the hereditary plagues. They are, excepting certain instances, acquired in sin and self-disgrace. Why should we speak of the matter in a whisper? Is our silence strength or weakness?

J. N. HURTY, State Health Commissioner of Indiana.

Medical News Items.

MEETING OF THE CALCASIEU PARISH DENTAL SOCIETY.—The first regular meeting of the Calcasieu Parish Dental Society met November 9 and elected the following officers: Dr. B. J. Lacour, Welsh, president; Dr. A. W. Guillory, Kinder, vice-president; Dr. Thomas S. Eldridge, Lake Charles, secretary-treasurer. The members of the Executive Committee are Drs. J. D. Carter, T. S. Bennett and A. K. Fort, of Lake Charles.

ACADEMY OF MEDICINE ELECTION.—At the annual meeting of the Shreveport Academy of Medicine, the following officers were elected: Dr. Wm. K. Sutherlin, president; Dr. Jos. E. Knighton, vice-president; Dr. P. W. Oden, secretary; Dr. Arthur A. Herold, treasurer.

MEETING OF THE EAST FELICIANA PARISH MEDICAL SOCIETY.—The East Feliciana Parish Medical Society held its regular December meeting in Clinton, at the office of the secretary-treasurer, on Wednesday, December 6, with the following members present: Dr. J. W. Lea, of Jackson, president; Dr. Thos. Norwood, of Norwood; Dr. T. W. Young, of Clinton; Dr. E. M. Toler, of Woodland; Dr. A. J. Roberts, of Olive Branch, and Dr. W. B. Singletary, of Wilson. Dr. A. F. Barrow, of St. Francisville, was also

present by special invitation, and joined in the medical discussions. There being no parish organization in his parish, he presented his application for membership in the East Feliciana Parish Medical Society, which was gladly accepted.

Dr. E. M. Toler, of Woodland, read a most comprehensive paper on tuberculosis of the lungs, touching on the different modes of treatment, and mentioning cases in his practice which were yielding to treatment. After a full discussion of his paper and other clinical cases, the members adjourned to the Rist House, where the usual sumptuous banquet was enjoyed. This is one of the best, if not the best, parish societies in the State. Organized three years ago, it has never failed to meet once every other month, and always with a good program and a full attendance. The meetings are looked forward to by the members with the keenest pleasure, and the Society is not only doing a good work in a scientific way, but the good dinners following each meeting, where the doctors actually break bread together, have served to bring them closer together and promote a brotherly feeling. The next meeting will be on Wednesday, February 7, 1912.

VITAL STATISTICS LEGISLATION.—In four Southern States, Louisiana, Mississippi, South Carolina and Virginia, there are no provisions whatever for the proper registration of births and deaths, except in a few of the larger cities, where there is some form of death and birth registration. Only in twenty-four of our States do we know how many lives are lost each year. This is a serious matter, and should be considered by those who are interested in promoting the welfare of humanity.

OWEN BILL REINTRODUCED.—Senator Owen has given notice of his intention to reintroduce his bill for a national health department.

THE MEDICAL REVIEW OF REVIEWS, beginning with their January issue, proposes to introduce many new ideas and improvements. *Therapeutic Medicine* will be absorbed by the *Review*.

JOURNALS NAME EDITORS.—Dr. Charles E. de M. Sajous, of Philadelphia, has been made supervising editor of the *New York Medical Journal*, and Dr. E. A. Hines editor of the *Journal* of the South Carolina State Medical Association.

NEW HOSPITAL FOR MONROE.—Rev. L. Enaut, of Monroe, has

donated a portion of his property in that city and \$20,000 in cash for the establishment of a sanatorium, to be in charge of the Franciscan Sisters, and to be known as St. Francis Sanatorium.

THE NEW YORK ACADEMY OF MEDICINE voted unanimously that a secret division of fee with any person was unworthy of a member of the medical profession, and should be counted as sufficient ground for the expulsion of the member.

ANTI-TUBERCULOSIS LEAGUE.—At the December 14 meeting of the Louisiana Anti-Tuberculosis League the following officers were unanimously elected: Dr. G. Farrar Patton, president; Dr. Adolph Henriques, first vice-president; Miss Kate Gordon, second vice-president; Dr. A. I. Weil, secretary, and Dr. George S. Brown, treasurer.

CHAIR IN TULANE DENTAL DEPARTMENT FILLED.—At a recent meeting of the Board of Administrators of Tulane University, Dr. Samuel H. McAfee was elected to fill the chair of operative dentistry, dental pathology and therapeutics in the Dental Department, recently made vacant by the death of Dr. Louis D. Archinard.

THE AMERICAN JOURNAL OF SURGERY has in view the plan of producing special issues composed of contributions of surgeons residing within a certain geographical area. In furthering this plan a special Western number will be issued in the early part of 1912. The contributions announced are by well-known surgeons, and should be particularly interesting.

MARIE FEODOREVNA PRIZE COMPETITION.—Major Charles Lynch, U. S. A., as chairman of the Exhibition Committee of the American Red Cross, announces a prize competition in connection with the Ninth International Red Cross Conference, to be held in Washington, D. C., May 7-17, 1912. The details concerning the competition may be had from Major Lynch, at the Army Bureau, in the State, War and Navy Building, in Washington. The subjects for competition and the prizes are as follows:

SUBJECTS.—1. Organization of the methods of evacuation of the wounded on the battlefield, comprising as complete an economy as possible in litter bearers.

2. Portable (surgeons') washstands for war.

3. Methods of packing dressings at the aid stations and in the ambulances.

4. Wheeled stretchers.

5. Carriage of stretcher on muleback.

6. Folding stretcher easily portable.

7. Transport of the wounded between war vessels, hospital ships, and the coast.

8. The best method of heating railroad cars by a system independent of steam from the locomotive.

9. The best model of a portable Roentgen apparatus, permitting utilization of X-rays on the battlefield and at first aid stations.

PRIZES.—One first prize of 6,000 roubles (approximately \$3,000).

Two second prizes of 3,000 roubles (approximately \$1,500) each.

Six third prizes of 1,000 roubles (approximately \$500) each.

THE AMERICAN DERMATOLOGICAL ASSOCIATION held its usual mid-winter clinical meeting at Philadelphia on December 28.

PERSONALS.—Dr. Oscar Dowling attended the convention of the American Health Association, which met in Havana last month.

Dr. Edmond Souchon was elected to honorary and life membership in the Kentucky State Medical Association, in recognition of valuable work in anatomy.

Eleven women students are studying medicine in the University of Texas.

Dr. R. Matas and Dr. E. D. Martin, of New Orleans, attended the Washington meeting of the Southern Surgical and Gynecological Association, of which Dr. Matas was the presiding officer.

REMOVALS.—Dr. A. J. Newman, from Hillsdale, La., to Montpelier, La.

Dr. J. B. Godfrey, from Lake Charles, La., to Welsh, La.

Dr. A. E. Gerish, from Alva, Oklahoma, to Norman, Oklahoma.

Dr. S. M. Browning, from Grove, La., to Cotton Valley.

MARRIED.—On November 23, 1911, Dr. Louis Levin, to Miss Bessie Goldman.

On November 28, 1911, Dr. Robert Emmett Cloud and Miss Sallie Shepard Wood, at Florence, Ala.

DIED.—On November 29, 1911, Dr. W. R. Fly, of Amarillo, Texas.

Dr. J. C. Egan, of Shreveport, aged 89 years, one of the most widely known and esteemed physicians of North Louisiana. He was born in Virginia, graduated in 1847, and moved to this State in 1850. He was at various times Health Officer of Shreveport, President of the State Society, and member of the State Board of Health.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of respective publications. The acceptance of a book implies no obligation to review.

One Hundred Surgical Problems, by JAMES G. MUMFORD, M. D. W. M. Leonard, Boston, 1911.

This book contains one hundred clinical histories of various conditions. They form a series of selected cases from Mumford's practice.

The author has a clear way, all his own, of presenting his subjects, to which is due much of the merit of the book. We can assist, as it were at amphitheatre lectures by perusing at our leisure these instructive recorded cases.

LARUE.

The Treatment of Fractures, by CHARLES L. SCUDDER, M. D. W. B. Saunders Company, Philadelphia and London, 1911.

This is the seventh edition of this work, which alone speaks for its value. It has been thoroughly revised, with the addition of a number of new skiagrams.

Very important chapters are especially devoted to fractures of the skull, spine and the neck of the femur.

As to the operative treatment of fractures, he states his candid opinion as to its limitations, emphasizing that, by exercising greater care in the employment of the fundamental principles in the non-operative treatment of all fractures, the open method would seldom become necessary.

LARUE.

Collected Papers by the Staff of St. Mary's Hospital (Mayo Clinic). W. B. Saunders Company, Philadelphia and London, 1911.

The mere mention of the Mayo Clinic is sufficient guarantee of the great worth of this volume.

This is indeed a valuable collection of papers on various subjects by about twenty contributors, comprising the staff of the Rochester Hospital.

W. J. and Chas. H. Mayo have therein presented their practical experiences, with their personal views and deductions. We also take pleasure in mentioning Judd, Plummer, McGrath and Pilcher amongst other efficient members of that privileged group.

The book is handsomely bound, with clear type and fine paper. Illustrations, some beautifully colored, are not only quite numerous, but are worthy of special mention.

In fact, encomiums, as to the value of this collection of papers, are superfluous, and all we need add is to encourage their dissemination throughout the surgical world.

LARUE.

Manual of Pathology—COPLIN—Fifth Edition. Illustrated. P. Blakiston's Son & Co., Philadelphia, Pa.

In the fifth edition of this valuable little work many improvements are noted. The first notable and most striking improvement is an appendix, in

which is concentrated most valuable information as to post-mortem, histological and bacteriological technic.

The general subject of Infection and Immunity is handled in a concise and masterly manner, especial effort being made, in the consideration of the chapter on Infection, to correlate clinical and pathological data.

Foot-notes, containing most extensive references to the recent bibliography of the subjects considered, constitute a welcome and useful aid to any one desiring further information.

Altogether, the fifth edition of Coplin's work is even more useful and welcome than its predecessors. The illustrations are added to and improved, and the printers' art has not been spared in making the volume pleasing to the eye.

SEEMANN.

Applied Anatomy, by FREDERICK TREVES, M. D., F. R. C. S. Lea & Febiger, Philadelphia and New York, 1911.

This is the sixth edition of a work which made its initial appearance nearly thirty years ago.

Needless to say that it has been scrupulously revised by one of the best-known English anatomists, Mr. Keith.

Although primarily intended for students of advanced grade preparing for their final examinations, it can fruitfully be thumbed by practitioners, who will find the style pithy and concise.

The book forms one volume, small and handy to carry. There are many illustrations, which, however, are certainly not as fine and clear as in our American text-books.

LARUE.

What to Eat, and Why, by G. CARROLL SMITH, M. D. W. B. Saunders & Co., Philadelphia and London.

A practical presentation of food values in health and disease. No attempt is made at discussing the question of dietetics exhaustively, but rather a discursive survey of foods in their variety and purpose. In this the author has succeeded admirably. Groups of diseases are given, with diet indications in each, and the different types of organic affections receive full consideration.

The arrangement of the text is excellent, and the matter is presented so as to be easily followed and readily understood. Altogether commendable.

DYER.

The American Illustrated Medical Dictionary, by W. A. NEWMAN DORLAND, A. M., M. D. Sixth edition. W. B. Saunders & Co., Philadelphia and London.

This standard dictionary comes to us again in a complete revision, in which a number of improvements have also been made. A posologic and therapeutic table has been added, which increases the value of the book as a reference for the practitioner. Always among the standard word books in medicine, the revised edition of this work must hold its place among the authorities.

DYER.

The Parasitic Amebæ of Man, by CAPT. CHARLES F. CRAIG, M. D., U. S. A. J. B. Lippincott Company, Philadelphia and London.

This work must stand for a high example of the advance in medical research among American medical men, and as authoritative for the subject of which it treats. The appearance of a clear-cut monograph on amebæ at this time must satisfy a demand felt by the workers in tropical

medicine in this and other countries where the English language prevails.

The text has been carefully arranged so as to give a full concept of the field of study, and the organisms so far known are described from the points of morphology, biology and pathology. While few in number, the plates are excellently descriptive, and elucidate a text made all the more interesting by a fine letterpress. The book is replete with references, to which a large bibliography is added in the back.

The medical profession is to be congratulated on the appearance of so valuable and timely a guide, and the author must accept the thanks and gratitude of a host of readers.

DYER.

A Manual of Practical Hygiene, by CHARLES HARRINGTON, M. D. Fourth edition, revised and enlarged by MARK WYMAN RICHARDSON, M. D. Lea & Febiger, Philadelphia and New York.

The scope of the subject of hygiene has gradually broadened until to-day its application reaches out to satisfy a large part of the field of preventive medicine. As such, the texts on hygiene have grown in their material until the lines of limitation are hard to draw. The book before us is thoroughly in point, and in over 800 pages of text the subjects now accepted as properly belonging to the field of hygiene are discussed. Foods, their importance, divisions, and their abuse and adulteration are fully presented. Likewise the relation of air, water, drainage, sewage and habitations in their relation to public health, are fully discussed. Immunity, susceptibility and their converse infection and disinfection, are related. Vaccination, quarantine, and particularly hygiene of occupation, are disposed of. Insects and diseases, vital statistics, tropical, military, naval and personal hygiene, receive full consideration.

Under each of the above captions, exhaustive matter is brought out, and, as a reference and text-book, the work is in every way complete.

DYER.

Progressive Medicine. Edited by HOBART AMORY HARE, M. D., assisted by LEIGHTON F. APPLEMAN, M. D. Vol. XIII, No. 3. Lea & Febiger, Philadelphia and London.

To the busy practitioner, this quarterly review of medicine and surgery must always serve as a kind friend, culling the best for the reader, and always those things of most direct interest.

The present volume is up to standard, and carries articles digested and commented on by such collaborators as William Ewart (Diseases of the Thorax and Viscera), William S. Gottheil (Dermatology and Syphilis), Edward P. Davis (Obstetrics), and William G. Spiller (Diseases of the Nervous System).

Gottheil's article is especially noteworthy for its review of current dermatologic topics, touching on practical problems in the everyday practice of the doctor, such conditions as vaccine treatment, baldness, skin cancer, eczema and its treatment, lichen, rosacea, sporotrichosis, saline infusion in skin diseases, etc. A full review of the arsenic treatment of syphilis is given, with deductions of material value to those for and against arseno-benzol practice.

The other sections in this volume are also full of timely reviews, covering recent ideas and advance in the theory and practice related to each subject embodied in the several discussions.

DYER.

Food Values, by EDWIN A. LOCKE, A. M., M. D. D. Appleton & Co., New York and London.

This little book consists in a group of practical tables showing the

relations of foods to their values, as expressed in the terms of the constituent parts of food stuffs. The comparison of the various foods is presented, and the importance of each as parts of a dietary is shown. Enough text accompanies the tables to make them clear for the person who intends to use them. More valuable as a laboratory aid than as a practical vade mecum.

DYER.

A Manual of Pathology and Morbid Anatomy, by T. HENRY GREEN, M. D., F. R. C. P. Eleventh edition, revised and enlarged by W. CECIL BOSANQUET, M. A., M. D. (Oxon.), F. R. C. P. (Lond.). Lea & Febiger, Philadelphia and New York.

The new edition of this work carries the announcement of new publishers and a new edition, to both of whom the reader is indebted for a complete revision of the last edition, now six years old.

The arrangement of the text is excellent in its presentation of the evolution of the idea of pathology, beginning, as it does, with anomalies in the human subject, and gradually expanding these under morbid processes, with which the bulk of the book deals. Parasites are discussed before their morbid processes, and by the time the reader reaches complex morbid conditions he is ready and trained to think in problems. The concluding chapters deal with pathogenic processes in the various organs.

The illustrations are set in the pages of the text, and these are practical, with no attempt at artistic presentation.

The former popularity of the text will probably make a new interest for it, even if its own make-up and excellent character did not commend it on the merits of the present edition.

DYER.

The Physician's Visiting List. P. Blakiston's Son Company, Philadelphia, 1912.

Issued in a regular, a perpetual and a monthly edition, this is the sixty-first year of its publication. In addition to the visiting list proper, it contains a calendar for 1912-1913, tables of utero-gestation, of signs, incompatibility, poisons, weights and measures, dosage, etc. Bound in soft calf, it is practical and presentable.

Publications Received.

J. B. LIPPINCOTT COMPANY, Philadelphia and London.

Serum Diagnosis of Syphilis and the Butyric Acid Test for Syphilis, by Hideyo Noguchi, M. D., M. Sc.

Text-Book of Ophthalmology, by Dr. Ernest Fuchs. Authorized translation from the twelfth revised and enlarged German edition, with numerous additions, by Alexander Duane, M. D., Fourth edition.

MISCELLANEOUS.

Transactions of the American Otological Society: Forty-fourth Annual Meeting. (New Bedford, Mass., Publishing Company, 1911.)

Index Catalogue of the Library of the Surgeon-General, United States Army. Second Series, Volume XVI. (Washington Government Printing Office.)

Ophthalmic Myology, by G. C. Savage, M. D., Second edition. (McQuiddy Printing Company, Nashville, Tenn., 1911.)

Sanitary Code, State of Louisiana, prepared and promulgated by the Louisiana State Board of Health. (Chronicle Publishing Company, Alexandria, La.)

Recent Studies of Cardio-Vascular Diseases. Medical Symposium Series No. 2. (Interstate Medical Journal Company, St. Louis, 1911.)

Recent Studies of Syphilis. Medical Symposium. Series No. 1. (Interstate Medical Journal Company, St. Louis, 1911.)

Forty-third Annual Report of the Secretary of State on the Registration of Births and Deaths, Marriages and Divorces in Michigan, for the Year 1909. Frederick C. Martindale, Secretary of State.

Monthly Bulletin Louisiana State Board of Health, Volume I, No. 1. (Sendker Printing Works, New Orleans, 1911.)

Reprints.

History of the Movement for the State Registration of Nurses, by Eugene Underhill.

Nostrums and Quackery. (Press of the American Medical Association.)

Suits for Alleged Malpractice, by Geo. W. Gay, M. D.

The Salient Epidermological Features of Pellagra, by C. H. Lavinder.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans
FOR NOVEMBER, 1911.

CAUSE.	White.	Colored.	Total.
Typhoid Fever.....	5	1	6
Intermittent Fever (Malarial Cachexia)	1	2	3
Smallpox.....			
Measles.....	1		1
Scarlet Fever.....	1		1
Whooping Cough.....	2		2
Diphtheria and Croup.....	3	1	4
Influenza.....	8	2	10
Cholera Nostras.....			
Pyemia and Septicemia	1	1	2
Tuberculosis.....	31	27	58
Cancer.....	16	6	22
Rheumatism and Gout	1	1	2
Diabetes	1	1	2
Alcoholism	1		1
Encephalitis and Meningitis.....	1	3	4
Locomotor Ataxia.....	2		2
Congestion, Hemorrhage and Softening of Brain.....	19	10	29
Paralysis	1	2	3
Convulsions of Infants	3	1	4
Other Diseases of Infancy	10	6	16
Tetanus.....	4	1	5
Other Nervous Diseases	2		2
Heart Diseases.....	61	33	94
Bronchitis	7	10	17
Pneumonia and Broncho-Pneumonia.....	17	16	33
Other Respiratory Diseases.....	1	3	4
Ulcer of Stomach.....	1		1
Other Diseases of the Stomach	7	4	11
Diarrhea, Dysentery and Enteritis.....	23	15	38
Hernia, Intestinal Obstruction.....	3	2	5
Cirrhosis of Liver.....	10	4	14
Other Diseases of the Liver	2	2	4
Simple Peritonitis			
Appendicitis.....	1	2	3
Bright's Disease	26	20	46
Other Genito-Urinary Diseases.....	10	3	13
Puerperal Diseases	5	6	11
Senile Debility	9	3	12
Suicide	4		4
Injuries.....	30	24	54
All Other Causes.....	25	13	38
TOTAL	356	225	581

Still-born Children—White, 24; colored, 26; total, 50.

Population of City (estimated)—White, 272,000; colored, 101,000,
total, 373,000.

Death Rate per 1000 per annum for Month—White, 15.70; colored,
26.73; total, 18.69.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure..... 30.14
Mean temperature..... 59.00
Total precipitation .. 4.08 inches.
Prevailing direction of wind north.

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Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a **WRITTEN** order for the same accompany the paper.)

Another Case of Fecal Obstruction of the Small Intestine.

By DRS. W. D. ROUSSEL and ESPY WILLIAMS, Patterson, La.

In this JOURNAL (August, 1908) one of us reported an instance of this condition. We will remind the reader again that the occurrence of this accident is of extreme rarity, and he is referred to the article mentioned for a discussion as to this point, and also for the physiological explanation of this infrequency. The case is as follows:

T. R., white male, aged 57. Two days prior to consultation he partook of a very large meal, consisting mainly of cabbage and meat. He was ordinarily a great eater, but this meal was even more substantial than usual. That night he had some abdominal pain, not very severe, and vomited whatever remained of his meal. After vomiting he felt better, and slept well until early morning, when he took train for New Orleans. En route he was seized with another attack of pain and vomiting, and, upon reaching the city, he felt so badly that he was unable to attend to the business

which he had on hand, but remained abed at his hotel during the day, and took train for home again that evening. His bowels did not move during the day, and he continued to have slight cramping pains in the belly, but no vomiting. After reaching home he felt fairly comfortable and went to bed early, sleeping pretty well and being awakened at about 7 A. M. by a recurrence of the pain. He did not vomit at this time. For the first time, now, he applied for medical advice. Condition at this time as follows: Temperature normal, pulse 80 and regular, respiration unembarrassed, slight abdominal distention, urine normal, organs above diaphragm normal. Peristalsis was apparently somewhat increased on auscultation. His bowels had not moved since the onset of his trouble. The skin of the whole body surface was slightly cyanosed. There was nothing at this time to indicate any severe lesion, except the symptoms of increased peristalsis and absence of bowel movement. The previous history was one of regularity as to evacuations, and never any illness of any sort. He was given at this time a high enema of water and suds, and the result of this was apparently good—a large, well-formed stool, with a great deal of flatus being brought away. He then again became comfortable, and seemed to be in good condition that night. His cramps recurred the next morning again, this time with vomiting, and were, so he said, more severe than ever before. His bowels had not moved since the administration of the enema the previous morning, but he had been passing a small amount of flatus from time to time. At this time his general condition had not improved—was, in fact, a bit worse than on the day before. The pulse had risen to 92, the cyanosis was increased, though the body surface was warm. There was no fever. He complained of occasional abdominal pains which he was unable to locate well; there was slight distention of the abdomen, and peristalsis was increased (on auscultation only, the walls being quite thick). He vomited occasionally a small amount of thin fluid. On palpation there was slight soreness over the entire abdomen, not particularly localized; there was no rigidity. On very slight percussion there was elicited an area of slight dullness, oval in outline and occupying the left lower quadrant, the bladder region, and extending two inches to the right of the median line and as high as the umbilicus. Light finger-tip palpation over this area brought out apparently a sense of resistance

which was within the abdomen, and not a muscular spasm; but no definite tumour mass could be found either here or anywhere else. The bladder was catheterized and two ounces of highly concentrated urine obtained. This was free from albumen, and contained a few casts (hyalin) and considerable indican. Bimanual examination was negative.

DISCUSSION.—It was evident that the patient was a very sick man, though his immediate condition did not appear alarming. For diagnosis, the most likely hypotheses were those of auto-intoxication, perforative peritonitis, intestinal obstruction and uremia. The first of these (autotoxemia) we set aside, owing to the length of time that had elapsed since the onset. Were it this with which we were dealing, his condition seventy-two hours after its onset would have been extremely grave. In a perforative peritonitis the same would apply, and we should have found also tenderness, rigidity, absence of peristalsis, and, in all likelihood after the shock of perforation had passed, a rise in body temperature. As against a uremic crisis was the fact that, though the amount of urine had been noticeably diminished since the onset, there was no albumen and the character of the casts was not of great importance. Besides, there were none of the other usual signs of this. The urinary changes did, in fact, help in the persuasion that the lesion was of an obstructive sort, and we were inclined to class it as such here. The question now was, if an obstruction, to what is the obstruction due? Against invagination were his age, no passage of blood from the bowel, no history of previous bowel affection, no tumor. The dullness and sensation of resistance in the left lower quadrant suggested volvulus of the sigmoid, but against this was the absence of prior history of constipation, the subacute character of the symptoms and the occasional passage of flatus. His age, on the other hand, the fact that he had had a bowel movement and had passed gas, and especially the very active peristalsis, suggested strongly the possibility of carcinoma of the gut, even in the face of his previous negative history, these growths frequently giving no evidence of their existence until obstruction takes place. Against this was only the one fact that, in carcinomatous stricture, when obstruction does take place, it is usually not simply a rapidly increasing obstruction, but a complete occlusion, in which case the symptoms are those of

acute intestinal closure purely; and these were lacking here. One symptom which was especially hard to account for was the cyanosis; this was considered to be due to toxemia.

We were evidently dealing with a case either of impaction or incomplete obstruction from some other cause; just what, it was impossible to "guess." At this time we gave him an enema of alum in salt solution, which resulted in a large, well-formed fecal evacuation, with much gas, and a decided increase in our confusion. We therefore decided to watch him for a short while longer, with the intention of subjecting him to an exploratory operation if within six hours his condition remained stationary or grew worse. Purgatives up to this time had been avoided, but we now washed out his stomach and gave him two ounces of castor oil by the tube. Four hours after this he began vomiting again, the pulse went up to 102, cyanosis increased, and we decided to operate. Operation was made as follows:

Ether. Median incision from umbilicus to pubes. (We do not make small incisions in explorations of this sort, as we believe that they are liable to lead to confusion and oversights, and usually need lengthening, thus increasing the time consumed.) There was a small quantity of straw-colored fluid in the cavity. A large coil of injected and distended small bowel lay in the left lower quadrant and hypogastrium (corresponding to the area over which dullness and slight resistance were found). At one point over the bowel was a small area of localized peritonitis caused by a small non-perforating stercoral ulcer. (This was found later at autopsy.) Introducing the hand within the cavity we came at once upon a small, hard mass, which had prolapsed the bowel into the pelvis. This was brought out, and was found to be within the bowel. An incision was made into the bowel and the stone removed. It was one and one-half inches in diameter, two inches long. One of its extremities was irregularly rounded in shape, the other being smooth and flattened, with sharp edges. This flattened extremity was directed towards the distal end of the bowel, and led to the belief that another stone had been present on that side, but search for this was negative as far as the cecum. (It was not necessary to go further than this, since it was evident that, had the second piece reached the valve and gone through, it could have traversed the large bowel without trouble.) It was

thought possible that the stone might have been formed in the gall-bladder, since, on quick examination, it resembled a large gall-stone in many points, especially in its flattened end; but the gall-bladder was found normal. The wound in the bowel was sutured and the gut returned to the cavity, which was drained.

The patient passed no urine from the morning of the day upon which the operation was made, and died the following day, twenty-four hours after the operation.

Autopsy showed the abdominal cavity clean; there was no other obstruction at any point. The kidneys presented the picture of an acute glomerulo-nephritis. The point at which the stone lay was four and one-half feet from the ileocecal junction. A small stercoral ulcer was found six inches from the incision in the gut, at which place the mass had evidently been lodged firmly for some time before moving on.

Tuberculosis in Childhood from a Clinical Standpoint.*

By SOLON G. WILSON, M. D., New Orleans.

To present this Society something that has not been thoroughly gone over, or a subject that has not been viewed from every standpoint, is not my desire nor intention to-night. I do want to offer, however, some observations made by me during my work with Professors Hamburger and Neuman, of the University of Vienna. Of course, you will and do appreciate that, to cover a subject so important and as extensive as tuberculosis in so brief a period as is allotted to this paper, offers an opportunity for overlooking a great many important facts.

To my mind and interpretation, the analogy between tuberculosis and syphilis is so striking that we are justified in offering the two for clinical comparison. In considering both diseases we have chronic conditions. Each provokes a primary lymph gland involvement. Each has a primary, secondary and tertiary stage, and both conditions develop the primary lesion where the infection took place.

In both conditions the secondary lesion lasts for a term of several years, with a constant tendency to relapse. The secondary lesions vary in different children; nearly all lesions considered

* Read before the Orleans Parish Medical Society, December 9, 1911.

scrofulous were tubercular. The von Pirquet skin reaction and *post-mortem* findings in European cities have led to this conclusion. When children in the tenement districts will have reached the age of fourteen they will have been infected with tuberculosis.

For convenience, the periods of infection are subdivided into six, as follows:

(1) One year, 1 to 2 per cent are infected; (2) two years, 10 per cent are infected; (3) three to four years, 25 per cent are infected; (4) five to six years, 50 per cent are infected; (5) seven to ten years, 75 per cent are infected; (6) eleven to fourteen years, 95 per cent are infected.

Further observations have shown the earlier the infection takes place the graver the prognosis.

Of the children who are infected during the first year of life, 80 to 90 per cent die of the disease, and of children infected during the first four months of life, all die of the disease. As the age increases, the danger from tubercular infection diminishes.

If the original infection does not take place before the child has reached eight or ten years of age, this infection is hardly likely to develop into a disease.

RESUMÉ OF THE POST-MORTEM FINDINGS, in brief, as follows: 1, The older the children, the oftener the foci are found; 2, the mortality from tubercular infection is less the later the infection takes place; 3, the most frequent cause of death in tuberculosis is the general miliary type. It has also been shown that the pulmonary type is found oftener after the tenth year of life. 4, The most frequent primary localizations are in the bronchial lymphatic glands and the parenchyma of the lungs; 5, we frequently see healed tuberculosis in the form of cicatrical tissues after the seventh year of life.

Conclusions from experiments with guinea pigs have led to the belief that 95 per cent of tubercular infection takes place through the respiratory route. Experiments have shown further that it only takes 100 bacilli inhaled to produce the lesion, while it takes to produce mesenteric tuberculosis *one hundred million* bacilli.

The comparative figures of the routes of infection, given by Hamburger, of Vienna, are as follows: Respiratory route, 95 per cent; alimentary route, 3 per cent; skin route, 2 per cent.

Personally, I have always felt that the danger from the alimentary route was exaggerated, and that the source of danger was through the naso-pharyngeal route, directly from man to man. With all due respect to the supporters of the alimentary route being the most frequent way of original infection, I herewith submit a paragraph from Holt's fifth edition (page 1073), which offers some practical food for thought:

"Near a large American city was a fancy stock farm of registered Jersey cows, which supplied milk for table use and infant feeding to a large number of families in the wealthiest part of the city for a period of over ten years. At the end of that time the tuberculin test was used for the first time, and 45 per cent of these cows were found to be tuberculous, and were killed by the order of the State Board of Health. The diagnosis was confirmed by autopsies upon the animals in every instance.

"An investigation was instituted among the children who had been fed upon this milk, but in only one case of many hundreds could it be learned that tuberculosis had developed, and in this instance it was by no means established that the milk had been the source of infection. It should be stated that this was before the days of sterilizing milk for infant feeding. Besides the families who took the milk in the manner mentioned, the employees at the farm were accustomed to drink the skimmed milk in large quantities daily as a beverage in place of water. Many of them continued to do this for years, and yet not one of them developed tuberculosis."

Another danger that is to some extent overdrawn is the infection from the streets. An investigation along this line was done by Hamburger and von Pirquet at the head of the Commission of Austria for Research Work. This Commission held under observation for the period of years the street sweepers who lived in the streets, having as their duties the cleaning, etc., where there were no rules enforced against expectorating upon the streets. Their report was that they did not find an increase of tuberculosis in these men over others of different occupations.

I hope you will not misinterpret me, as I feel that a great deal of good has been accomplished by health boards in their precautionary measures with cattle, also with sputum cups, etc., all of which have my warmest advocacy, but I do feel that they occupy a small place compared to the danger from individual to individual.

The remedy, of course, is to place, or to have laws enacted, restricting these poor unfortunates who are suffering from open tuberculosis of the pulmonary type.

It has been shown and traced that it is only necessary to come in contact with a person suffering with active pulmonary tuberculosis for a period as brief as ten minutes to produce the lesion.

The further remedy to correct this evil is to have a law requiring all cases of pulmonary tuberculosis reported to the boards of health and held under observation. In other words, these should be treated as is any other highly infectious disease.

The illustration for the necessity of early isolation of tubercular subjects which is given below is one of many hundreds that could be offered as proof. A father who had pulmonary tuberculosis for two years had a family of six children, as follows:

AGE.	TIME INFECTED.	CONDITION OF CHILDREN.
10 Years.	8 Years infected.	Strong child.
8 Years.	6 Years infected.	Healthy child.
6 Years.	4 Years infected.	Healthy child.
4 Years.	2 Years infected.	Scrofulous child.
2 Years.	1 Year infected.	Very bad condition.
1 Year.	1 Year infected.	Very bad condition.

The subsequent examination, two years later, showed that the last two children have died of tuberculosis, and the four-year-old child is very weak; the father is dead, and the three elder children are in good health.

The practical application of this is, if the cloak of protection is thrown around the children the first three or four years of life against tubercular infection, then the degree of danger from infection is comparatively insignificant.

Tuberculosis should be divided into biological and pathological tuberculosis, and, as a matter of fact, tubercular infection that takes place after the fifth or sixth year of life is not significant, and theoretically we may go further and say it might offer some advantage because of the anaphylaxis being kept up.

A glaringly striking feature of tuberculosis in connection with syphilis is that it offers immunity to reinfection.

As proof of this, take a drop of tubercle bacilli, smear on a wound of a guinea pig, and during the course of three or four weeks an ulcer and lymph gland swelling will appear.

Wait three months and attempt this on the other shoulder of the pig and he will not give a lesion, which demonstrates that he has been immunized.

This same immunity is evidenced by the wife of a consumptive

husband who does not develop the disease; in her we will be able to get a very active von Pirquet reaction at all times, which indicates that her susceptibility is constantly kept up.

The way in which immunity is effected is explained in two ways: First, by an antitoxic action; second, by keeping up the susceptibility of the anaphylaxis.

Anaphylaxis is further explained as being the reaction of the tuberculin irritating the lymph glands and lung foci and thereby producing hypermia, leading to an exfoliation of tuberculous tissue, producing granulation tissue and hyperfunction, and in this way producing more lymphocytes.

It is believed by some that lymphocytes contain lipolytic ferment, which dissolves the fatty substance of the tubercle bacilli.

THE VON PIRQUET REACTION.—To have a thorough conception of the usefulness of this or any other tuberculin reaction or the value of it as a diagnostic agent, it should be first borne in mind that tubercular infection does not mean necessarily a tubercular disease.

It must be remembered, too, that in crowded cities as the age increases there is more likelihood of there being established a tubercular infection not necessarily a disease; the infection, nevertheless, is found in 95 per cent. of adults, which makes its diagnostic usefulness limited to the first few years of life—that is, the positive reaction. The negative findings have more significance in ruling out tuberculosis; in other words, if you had a skin lesion and thought it *tubercular* and would get a negative von Pirquet, it would rule out T. B., but if it were positive after a certain age, it might be the reaction of a focus some where else in the body. Tuberculin reactions are increased and diminished by certain conditions as follows, viz.:

The susceptibility is increased by (1) active processes; (2) every application of tuberculin.

The susceptibility is diminished by (1) generalized miliary tuberculosis; (2) tubercular meningitis; (3) active diseases of infectious type, especially measles, pneumonia, cerebro-spinal meningitis, influenza and pertussis.

Measles for six days, during active condition in tubercular cases previously established, will give negative reaction, and after measles there seems to be a kindling up of the processes, which may be

explained by some of the antibodies being used up. This explains the necessity for extraordinary care of the young child infected with tuberculosis following measles.

Tuberculin injected into an infected individual is highly toxic, and injected into an uninfected is nontoxic.

For example, you could inject one milligram into a child uninfected without a reaction; on the other hand, this amount injected into an infected child could produce death.

The preference has been given to the von Pirquet reaction, although the conjunctival reaction of Calmette has many adherents, especially in Germany. Comparing the two, however, it has been found, first of all, that the danger of causing a focal reaction seems to be well established. Secondly, it gives the reaction in 89 per cent. of the proven cases; the reaction is not dependable in cases of great anemias or in patients with vaso-motor disturbances.

Now, on the other hand, the von Pirquet reaction is also interfered with in very poorly nourished subjects, but the percentage of reaction is somewhat higher than Calmettes.

The method of tuberculin reaction that will give you 100 per cent. reaction, and can always be depended upon for diagnosis, is the subcutaneous method, bearing in mind that your patient is subject to a marked reaction, with a possibility of kindling up a focal reaction and to some extent attended with danger.

The Von Pirquet test represents 1 to 100,000, and the average test for susceptibility subcutaneously is 1-1000 milligram. The reaction from von Pirquet is a redness with infiltration appearing within 24 hours, and the subcutaneous injections gives a more extensive redness and some swelling with infiltration, accompanied by general reaction of temperature from 1 to 3 degrees; this appears within 24 hours, increasing usually to 48 hours.

This last reaction is scientifically perfect but for the danger of converting a latent inactive into an active process.

At the beginning of this paper the attention was called to the three stages of tuberculosis, and to my mind the different types of tuberculosis should not be dwelt upon but should be classified according to the stage.

The primary stage does not offer a definitely clear picture, under which could be considered, however: Fevers remittent in character, emaciation; coughs, often due to pressure of the bronchial glands

upon the nerves. Very often no area of dullness is found, dyspnea, expiratory high pitch metallic cough.

The secondary stage, like syphilis, is characterized by its recurrences, and under this head would be classed: Skin eruptions, called tuberculides; nodules, bone lesions (as coxitis, spondylitis), tubercular meningitis, serous pleurisy, tubercular peritonitis.

The tertiary stage is the stage of chronic infiltration and the breaking down of lung tissue. Under this head would come the pulmonary tuberculosis.

The success of handling these cases in children seem to be entirely due to proper hygiene and plenty of good nutritious food.

As to the tuberculin side of the treatment, the men with whom I worked in Europe are unanimous in the statement that it is a dangerous procedure, and, if used at all, should be used in very small doses. And this application is made to all forms and stages of tuberculosis.

The principle being to keep up the anaphylaxis and not to get an antitoxic action, as in the case with large doses.

In conclusion, I want to say that I believe that if we could formulate and carry out some plan whereby we could prevent tubercular infection taking place in the first three or four years of life, we should not only reduce infant mortality but should reduce adult morbidity, as it is more than probable that the disease is a resuscitation of an infection that took place in early childhood.

Report of a Case of Idiopathic Purpura Hemorrhagica.*

By WALTER TUSSON, M. D., New Orleans.

Before reporting this case I desire to say a few words in regard to the rarity of this obscure affection which Osler says "we know so much and at the same time so little." Joseph H. Pratt contributes an interesting article in Osler's *Modern Medicine*, in which he gives the following figures as to its occurrence:

"At the Massachusetts General Hospital 65 cases of idiopathic purpura occurred among 155,884 medical and surgical in-patients during thirty-three years. At the Johns Hopkins Hospital, 41 cases were observed in 18,594 cases. At the Hamburg General Hospital there were 73 cases in forty-one years in a total of 100,000 patients (Scheby-Buch). Thirteen cases occurred in the Mary Magdalen Hospital of St. Petersburg during twenty-four years among 82,000 (Masing). S. Mackenzie states that of 63,834 cases in the London Hospital, there were 200 cases of purpura. This included symptomatic as well as idiopathic purpura."

* Read before the Orleans Parish Medical Society, December 9, 1911.

In looking over the available records of the State of Louisiana, I have found very few cases reported. Dr. Felix Larue has reported one case of subacute purpura hemorrhagica before the Louisiana State Medical Society in 1908 (published in the *NEW ORLEANS MEDICAL AND SURGICAL JOURNAL*, in 1909, Vol. 61). In none of the cases recorded was any mention made of negroes having been attacked by this disease.

CASE. Gladys Schroeder, aged 4 years and 4 months; white female; was the adopted child of Mrs. Schroeder. Nothing is known of her family history up to the age of 18 months, at which period she was placed in the care of Mrs. Schroeder. We do know, however, that she was vaccinated in the summer 1910, and had measles a little over a year ago. Never had scarlatina or diphtheria; in fact, she seemed to enjoy excellent health up to the present illness, outside of attacks of recurrent epistaxis at long intervals, which were easily controlled. My attention has just been called to the fact that 22 months ago the child suffered from an attack of iodism, produced by a too free application of tincture of iodine, resulting in a slight swelling of the right hand, which disappeared in 2 or 3 weeks, leaving behind a perfectly healthy cutis. Appetite was always very good; bowels moved normally and a laxative was rarely acquired.

RECENT ATTACK.—On the night of Tuesday, October 23, she woke and commenced to fret and cry; had no pain in the stomach; had been suffering from an attack of toothache off and on which was promptly relieved by local applications of oil of cloves. On Tuesday morning she ate breakfast composed of hominy, with a little wienerwurst sausage, well boiled. Had this diet before. She took dinner at 5 p. m., partaking of a little meat, with some home-made noodles, which she ate with her usual good appetite. Never drank coffee; ate a banana in the morning, no other fruit that day. She got up to urinate at 2 or 2:30 a. m. Wednesday morning, after which she went to sleep again and rested till 7 a. m. After rising she had an evacuation of the bowels; stools contained blood and mucus. Mrs. Schroeder administered a dose of castor oil with a little orange juice, which was soon followed by three or four stools containing mucus and free blood, accompanied by slight tenesmus. Half a cup of boiled milk and two soda crackers were then given to the child, which were rejected by the stomach about

three-quarters of an hour after their ingestion. This happened on Wednesday, October 24—the day I was called in on the case. Reaching the house at 6 p. m., I immediately instituted treatment for what I judged to be a case of dysentery, ordering fractional doses of calomel, followed by a moderate quantity of castor oil, and rectal enemata of boracic acid with a few drops of tincture of opium. The temperature at the time was 101° in the groin. The following day only slight traces of blood could be seen in the stools, but the little patient complained of colicky pains in the epigastrium, which had already manifested themselves on the previous day and seemed to remain stationary. The temperature was between 99° and 101° ; the general condition seemed otherwise good, and the patient retained food (Ducro, milk and broth given alternately), and, likewise, a mixture of magnesia and pepsin which I prescribed to allay the gastric irritability. Boracic acid enemata were kept up and counter-irritation on the epigastrium, with mustard and flaxseed at stated intervals. On Friday, Oct. 27, I could not detect any blood in the stools, and the little one was apparently restless, outside of an occasional pain in the region of the epigastrium, which did not prevent her from retaining her food and medicines.

A cursory examination of the heart, lungs, liver, spleen, kidneys and glands showed no apparent lesions. There were no Hutchinson's teeth. The temperature was still persisting between 99° and 101° ; the pain in the epigastrium had increased slightly, and her facial expression was rather drowsy and droopy. I could notice no edema of the face and feet, and there was a complete absence of arthritic manifestations. That same evening I was summoned to her bedside for a slight attack of epistaxis, which was readily controlled with cold applications to the nape of the neck. She subsequently passed a fairly good night. For the two days following, her condition remained practically the same, the temperature not varying and the epigastric tenderness always persistent. There were no petechiæ or ecchymoses, although the mother claims she saw a rash on the child's face. On the morning of the twenty-eighth she suffered from another attack of epistaxis, controlled by the usual methods, but towards evening she had a third and more severe attack, which left her considerably weakened, and saturating at least three napkins. At this juncture I began to notice signs of toxemia. Three or four hours after a large quantity

of coffee-ground substance was vomited; I attributed that, at the time, to some blood which had trickled back into the post-nasal space and had reached the stomach, where it had been subsequently digested by the gastric juices. There was no increase of temperature that day, but the epigastric pains became of a more violent character and more frequent, continuing in intensity Wednesday, Thursday and Friday, with coffee-ground vomits on an average of four or five a day, leaving the patient more depressed after every attempt. The stools presented a general tarry appearance. She began to refuse Ducro, milk and broth, which the stomach refused to retain; suffering all the time from constant attacks of nausea and intense colicky pains, which were relieved with pellets of cracked ice per mouth and small quantities of cold champagne, placing at the same time an ice-bag to the stomach. Drop doses of aromatic sulphuric acid and oil of turpentine were given at regular intervals of every two hours for the control of hemorrhages. The condition becoming steadily worse, I stopped all medication, adopting an expectant plan of treatment. The use of horse serum, or that of the human serum as used by Welch in some of his cases; also the peptone of Witte, all of which had been employed with varying success, suggested to my mind the advisability of having recourse to one of these methods, but I considered the condition of the child so hopeless that I hesitated to inflict any further torture on the unfortunate little one.

Realizing the gravity of the case, I immediately summoned Dr. G. Keitz and Dr. Upton in consultation. Dr. E. S. Keitz was kind enough to lend us his assistance in examining the nose and throat. The nose showed some denuded vessels on the septum, but no existing hemorrhage. The throat on examination exhibited slight hypertrophy of the faucial tonsils, but no bleeding vessels. Vision was apparently good. A macroscopical examination (Bass-Watkins' agglutination test) of the blood by Dr. Upton for typhoid gave a negative widal. I feel somewhat indebted to Dr. G. Keitz, who assisted me in getting up this history. We were unable to find any remains of petechiæ or ecchymoses. The examination of the urine showed slight albuminuria, but no hematuria. Dr. Harris examined the blood for the plasmodium, but found none. The stools and vomit showed the presence of blood. The following day the temperature had leaped to 104° in the rectum; the signs of

toxemia became more and more pronounced; and the patient gradually lapsed into a typhoid state, with low muttering delirium, severe prostration, irregular pulse and high temperature. It was only with great difficulty that the child could be aroused; and she began to sink slowly. The colicky pains became so violent that neither champagne or cracked ice could be kept on the stomach, and nothing could relieve them. The coffee-ground ejecta followed one another in quick succession at every fifteen minute intervals, and the child died at 12 o'clock that night after an illness of six days.

It is very much to be regretted that we were unable to secure the consent of the parents to perform an autopsy.

I had no hesitancy to pronounce this a case of idiopathic purpura hemorrhagica with this picture of gastric colics; the severe hemorrhages from the mucous membranes (nasal, gastric and intestinal and the profound toxemia); notwithstanding the absence of skin lesions and arthritic manifestations. Dr. Pratt in his recent contribution to Osler's *Modern Medicine* says that Osler has reported cases in which agonizing attacks of colic occurred without any cutaneous symptoms; he mentions further that there are cases which present the clinical picture of purpura hemorrhagica, except that cutaneous hemorrhages are absent. The arthritic manifestations have also been found absent in twenty-six out of thirty-five cases in Osler's series. Henoch mentions that single rings in the chain of symptoms may be lacking.

I was further confirmed in the belief that I was dealing with a case of idiopathic purpura hemorrhagica, owing to the absence of symptoms which are usually prominent in the diseases which must be differentiated from this condition. For instance in:

Leukemia, with its progressive enlargement of the abdomen, the gradual increase in the volume of the spleen and lymphatic glands; the shortness of breath, and insidious onset.

Scurvy, with its bleeding and spongy gums, loose teeth. foul odor of breath, unhygienic surroundings and previous poor health; and scleroderma or brawny induration of the skin and legs. In scurvy hemorrhages from the mucous membranes are not frequent; and hemoptysis and hematemesis are rare.

Hemophilia, with its marked tendencies to repeated hemorrhages and history of traumatic bleedings. The hemorrhages in hemophilia

are usually multiple and uncontrollable; persistent rather than transitory. The joint manifestations such as knee and elbow are quite common.

Pernicious anemia, with its history of gastrointestinal crises; mental shock or worry; its marked pallor and lemon tint of the skin; the increasing disposition to exertion with an uncontrollable feeling of faintness or breathlessness in attempting it. Progressive debility onset and œdema of the ankles.

I can safely say that none of these symptoms were present in my case and that there were no connections or it was not associated with any of the infectious diseases, such as pyemia, septicemia, endocarditis, typhus, measles, scarlet fever, small pox, etc.

Toxic states, such as arising from snake venom, copaiba, quinin, belladonna, mercury, the iodides, ergot, benzol, etc., could be excluded.

Cachectic conditions, also, as cancer, tuberculosis, Hodgkin's disease, Bright's disease, scurvy and senile debility.

Neurotic conditions, such as locomotor ataxia, acute and transverse myelitis, severe neuralgia and forms of hysteria.

Mechanical, such as pertussis and epilepsy.

In concluding, I can say with some degree of certainty that the etiology of this disease is still very obscure. A dozen or more observers have found at some time or other pathogenic organisms in the blood; but none of these discoveries have been confirmed. Letzerich described a spore bearing bacillus (bacillus purpura), Lecount and Batty described a remarkable case apparently due to a paratyphoid bacillus. Dieulafoy in his *Pathologie Interne* mentions micrococci of petrone. Streptococci and staphylococci have been found in the secondary purpuras of septicemia.

Two prominent phenomena have been repeatedly observed in the blood by such well known observers as Hayem, Ehrlich, Bensaude and others. First, a marked diminution of the blood platelets and second, a lack of retraction of the clot with no expression of serum; but these same phenomena have been found associated with other conditions.

Theories varying and conflicting have been advanced ad infinitum as to the cause of these hemorrhages and chapter after chapter has been written on the treatment of this disease, but the prognosis still remains serious whenever we are dealing with the severe forms



Fig 1



Fig 2

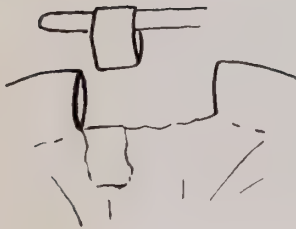


Fig 3



Fig 4



Fig 5

of this affection. Of one hundred and twenty-eight cases of all varieties occurring in children in Steffen's collection, there were forty deaths. In view of the great strides that the study of bacteriology has made in the last few years, let us hope that future pathologists will definitely settle this question of the etiology of purpura hemorrhagica, thereby leading us to a better understanding of the treatment of this disease.

A New Method of Enterectomy.

By OSCAR W. BETHEA, M. D., New Orleans.

The majority of the methods in use for approximation following intestinal resection present the common objection that they do not restore the original integrity of the tube. Either the lumen is encroached upon or the course of the intestinal current changed.

I suggest the following operation as being safe, rapid and not subject to the above criticisms.

Excision of the part to be removed is effected in the usual manner.

An additional section from one-half inch to one inch is incised as shown in Fig. 1.

The additional section is suspended on the handle of suitable instrument and a longitudinal incision made through peritoneum at point opposite mesentery as shown in Fig. 2.

The peritoneum is grasped with thumb forceps at margins of the incision and the peritoneum with some subperitoneal tissue peeled down and the musculo-mucous tube lifted out. (Fig. 3).

The ends of intestines are united with continuous suture through all coats. (Fig. 4).

One peritoneal flap is raised to cover one side of wound and the margin stitched with continuous suture. The other flap is then raised and sutured in same manner, but is made to slightly overlap the first flap, where the two meet in the median line. (Fig. 5).

I have only had opportunity to do this operation on animals, the specimen submitted being from a dog, on which I performed the operation three times at intervals of fifteen days. You will note that in this specimen the site of union of the intestinal ends is amply protected by the peritoneal flaps, and that the lumen of the tube is not encroached upon even to the slightest extent.

Hectine. Notes from Its Practical Use.

By E. M. DUPAQUIER, M. D., New Orleans.

It is, now, over a year and a half that the writer has, not only, read much about hectine or known it *much* through hearsay, but, actually became acquainted with it and applied its use, in his practice. So, he thinks he may be allowed to say something about it.

First, what is the stuff? It is the benzosulfone-parixamino phenylarsenate of sodium, in one breath, if you please, or can.

It was discovered by Mouneyrat, and soon experimented with, by Balzer, as a derivative of specific arsenicals, in cases of syphilis. The whole string of arsenical compounds tried in syphilis, before the latest researches of Ehrlich, were sodii-arsenate, cacodylate, arrhenal, atoxyl, arsacetin, hectine, Milan (See *Journal Médical Français*, No. 10, 25 Octobre, 1911), insists on the value of these new specific medications.

Balzer, in *Paris Médical*, discards atoxyl, arsacetin, arsenophenyl-glycerine, because they are dangerous, as everybody, now, knows. But, he recommends sodium cacodylat, particularly when combined with mercury salicylate, and places above all *hectine*, which, he claims, has come to stay, like salvarsan, in company with the veterans Hg. and KI. Nobody doubts to-day that the new remedies must be combined with the old ones. They complement each other in syphilis sterilization, and, confirmations that the loudest of the newest arsenicals salvarsan, *alone*, is insufficient, in general, could cover pages and pages, indeed.

Hallopeau has never adopted hectine as the exclusive treatment of syphilis; but he looked upon it as a dependable and very useful *aid* to mercury. All who used hectine admit, of course, that it is much less potent than salvarsan; but it is easier to handle for the practitioner, and it is applicable to a much larger number of diseases.

Hectine is used in solution, in powder forms. It can be made also into an ointment, all very useful applications to cutaneous and mucous lesions of syphilis.

But, the most common forms are pills with or without mercury, drops, and ampoules.

The writer has made use only of the ampoules for intramuscular injection as a better substitute for the older sodium cacodylat,

which he had already tried, years ago, not only in syphilis as an alternate with mercurial injections, but, also in malaria, where the parasite has acquired resistance or immunity to small repeated doses of quinin, and where large ones had not been given, at all, at first," in conditions of *arthritis* and herpetic-arthritis, as an alternate in the trial course, arsenic, sulphur, iodide, where the solution of Pearson, Fowler and Donovan had been used; and in the group of conditions mentioned above in a case of asthma, in particular, and in a case of gout. In all, hectine seemed to act well, and was more acceptable than other forms of arsenic.

As to the particular application of hectine around the initial sore, the chancre, and along the lymphatic channels or tracts, a daily injection of ampoule B, twenty centigrams of hectine being made, sore being on the prepuce, while intramuscular injections of biniodide of mercury and hectine were continued on every second day, in alternation, to bring about a cicatrization, which had been remarkably slow over two months during oral treatment, it was a pleasure to see the rapid change that occurred. Yet, the writer had no hectine ointment to apply over the sore as it is recommended by Hallopeau.

As to the idea of aborting a case of syphilitic infection in treating sores with hectine from the very start, I politely refrain from expressing my opinion. After all, it is good that such ideas should be entertained, for it illuminates the darkness ahead. But hectine (nor salvarsan for that matter) is not yet the "universal germicide" which will destroy the germs of diseases and yet not imperil the integrity of the human organism, as Watson says, in an article on "some uses for old drugs." (*International Clinics*, Vol. 3, 21st series.)

It is still very unsafe, in good practice, to consider as cured, cases that have been temporarily checked by a new remedy. And, to depend on any one of the newest remedy to cure, and to cure quickly either syphilis or tuberculosis, for example, is inviting disaster. Both these infectious processes, among others of course, are as a rule, particularly slow, very slow, in their evolution whether the organism finally wins or loses. So. it seems rational that treatment, (speaking of medicinal agencies), which after all is to help the organism, should be prolonged, spread over quite a period. Abortive treatments, massive actions are full of peril, in all cases. Let us

wait some yet, and still bear in mind the conservative principle that medicinal treatment is not the only useful part of the management of a case of sickness, which evolution is, in the run of things, usually very slow, thus giving the organism a better chance to increase its defense and win through other measures besides drugs.

Louisiana State Medical Society Proceedings.

EDITED BY PUBLICATION COMMITTEE,

DR. JOSEPH D. MARTIN, Chairman, 141 Elk Place, New Orleans, La.

DR. GEORGE B. LAWRASON, Shreveport, read a paper entitled

The Pathology of Pregnancy.

I have chosen my subject, "The Pathology of Pregnancy," because I believed it would be the most interesting and useful one I could think of to bring up before the Society for discussion.

I am well aware that the subject is too extensive for one paper, and for that reason requested members of the Society who wished to read papers in this section to select some portion of the pathology of pregnancy, so that, as a whole, we should present to the Society a very complete discussion.

The habit of menstruation is established, as a rule, many months before pregnancy occurs, so that unusual contraction and congestion occur at what would have been the menstrual period during a pregnancy.

This enables us to calculate very accurately the date of delivery by counting ten (10) lunar months from date of the last menstruation. Now, as fecundation could have occurred at any time between this last menstruation and the first miss, evidently the delivery must be brought about by that monthly exacerbation of contraction which comes about the time the fetus is ready for expulsion. But this habit which enables us to predict delivery also warns us that, as every monthly period is due, there looms up the danger of miscarriage, greatest with the first month and lessening on succeeding months, as the uterus becomes more tolerant of its burden.

Could we be aware of it, I have no doubt that a large number of miscarriages occur at the first menstruation, and to such of my patients, anxious for children, I have recommended confinement to bed from a day or two before, to the end of what would be the menstrual period. If pregnancy is established, then the slightest pain or show is especially dangerous as each month comes around.

Besides rest, we combat miscarriage according to the prominence of the symptoms of pain and hemorrhage.

I will never forget once in my practice being called to see a patient about three months pregnant who had so much hemorrhage that I thought everything had passed with the clots which had been thrown away before my arrival. Considering that, the only thing to do was to stop the hemorrhage, I gave large doses of ergot, and, much to my astonishment the pregnancy continued after the hemorrhage stopped. On looking up the literature of the subject I found that some masterly articles had been written on the use of ergot in preventing abortion.

Of course, opium in some form is our sheet anchor, and I feel I have obtained very good results with some of the remedies that contain viburnum.

As to when we should use one drug and when the other, the rule is easy—ergot for hemorrhage, opium and viburnum for pain, giving prominence to one or the other drug, according to the prominence of one or the other symptom.

Next, we will take up the nausea and vomiting of pregnancy.

I cannot believe any nausea at that time is ever normal, for I have seen patients go through the whole of pregnancy without it. In many cases it is only a discomfort; in serious cases it becomes a tragedy.

Many patients become nauseated on rising in the morning on an empty stomach, and the mere precaution of having them stay in bed until a little while after taking their breakfast each morning will be sufficient. On others, we may try every drug we have ever heard of, either internally or locally, to the cervix, without any effect.

Some of these will suffer daily martyrdom cheerfully, upheld by a supreme desire for a child, or by religious scruples, and will run the risk of dying rather than consent to an abortion.

Others may be driven to the verge of insanity by their suffering.

The rule I follow is that where I cannot relieve these symptoms, and find a patient losing ground from day to day, I lay the case plainly before husband and wife, telling them of the possibilities of going through to term safely, as well as of the dangers to be incurred, and let them make their choice.

If, however, albumen should appear in the urine, with the excessive vomiting, then unhesitatingly insist upon abortion as the only hope of the patient. It is a toxemia, and the source of the toxemia can be removed by emptying the uterus. If our patient dies it is because we have not emptied the uterus soon enough.

One cause of miscarriage (I have seen a number of such cases) is where a retroverted uterus becomes impregnated. In these cases the fundus does not rise above the promontory of the sacrum and we have first symptoms of bladder irritation from pressure of cervix against the sphincter of the bladder, and, finally, as the uterus grows, the pressure becomes great enough to stop the urinary flow and enormously distend the bladder.

I remember one case, a negro woman, was admitted to the Shreveport Charity Hospital whose bladder reached nearly to the umbilicus. She was immediately catheterized and an enormous amount of urine was drawn. On examination the fundus was found in the hollow of the sacrum, and the os, which pointed toward the bladder, could not be reached by digital examination. The next evening she commenced to have pains and a bloody discharge. The catheter could no longer be introduced; it was impossible to pull the cervix down or push the fundus into the abdomen. She was put on operating table, the bladder was opened from above, emptied, sewed up with catgut, then the peritoneum was opened, the hand was insinuated under the uterus, which was lifted out of its prison, the wound was closed and the patient made a quick recovery. Afterwards, going to term, a normal pregnancy.

But all cases are not as extreme as this one—by recognizing the condition early enough and placing the patient daily in Alexander's position, pulling the cervix down and pushing the fundus up, we can tide the patient over until the uterus has grown large enough to stay in the upper abdomen.

We now come to one of the great problems of pregnancy—the finding of albumen in the urine.

A woman needs sound kidneys to make a pregnancy safe—perhaps nature did not intend for toxemia to go with pregnancy, but practically there is more or less toxemia in all pregnancies, and it devolves upon the kidneys to excrete this noxious substance. Capricious, healthy kidneys may safeguard a patient who has a considerable amount of toxic substance. Crippled ones may get along when there is little of the toxins of pregnancy.

But the average woman stands a poor chance, if she starts child-bearing, even with a mild form of chronic nephritis. Do we not treat nephritis by lessening the work of the kidneys? Do we not restrict food and curtail exercise for fear that an acute Bright's may become chronic? how much more should we dread the over-work thrown upon them by pregnancy!

No, a woman with nephritis is too handicapped to subject herself to the perils of motherhood. But if a woman shows albumen in the urine toward the latter half of pregnancy, the question arises: Should we stop that pregnancy? Not necessarily.

Rest and diet to decrease the work of the kidneys. Purgative to supplement that work will tide many over this perilous time.

However, should convulsions supervene, showing that proper excretion has failed, if we wish to save our patient the uterus must be emptied at once. Our fight for her life will be none too easy, even with the advantage of having removed the source of the poison.

I will now call your attention to a very important question—When shall we use forceps in labor? I will first ask another question—Do forceps, properly used, cause injury? Remember, I say *properly used*. They should be used with thorough asepsis, also with gentleness; we should not try to pull the child through too contracted a pelvis. I think forceps applied high—that is, in the womb, as is often necessary—have a tendency to produce a greater amount of cervical tear in dilating the cervix than the bag of the waters, or even the head of the child in dry labor, so that the greater the delay, consistent with safety to mother and child, the less injury to be expected from their use. There are greater dangers, however, than cervical tears, and forceps applied high are more often called for than after the head has emerged from the cervix.

What shall be our rule? It differs with every patient. No two

patients suffer the same amount of pain, no two patients bear the same amount of pain equally well, mentally or physically; therefore the necessity for instrumental interference will differ with every patient.

My first rule is that the patient who needs to be anesthetized before the head is on the perineum should be delivered with forceps. The dangers of anesthesia are, in these cases, very much greater than any injury forceps could be blamed for.

My second rule is that lack of sufficient progress proportionate to the muscular exertion of the uterus, from whatever cause, such as faulty position, small pelvis or a very large child, needs mechanical interference, and we should not wait for the patient to become exhausted before using forceps.

My third rule is that, in any condition necessitating quick delivery, per vaginam, it should be done with forceps.

My fourth rule is that, should we have uterine inertia after the first stage is complete, the danger from continued pressure of the head on the soft walls of the vagina is great, and the application of forceps so easy and harmless we should never hesitate to use them.

As to the placenta, give it plenty time to come of its own accord. Keep the womb contracted by kneading it. If there is a true adherent placenta—a rare condition—then you can only be certain of removing it by the introduction of the hand in the uterus.

With a contracted, well-emptied uterus, we have no fear of hemorrhage from the placental site, and ergot and manipulation will contract the uterus. But we do have hemorrhage, often copious hemorrhage, under such conditions. Hot-water douching here is mere waste of time. A needle, catgut and needle-holder, is what we need, for such bleeding is from a torn vessel, and your patient is not safe until a suture has been introduced so as to close it.

This brings us to the subject of laceration. When should we mend a laceration? I will not weary you with the arguments of waiting five to seven days after delivery. I was once thoroughly convinced that it was the right thing to do, and that I had in the past been very wrong in attempting immediate repairs. Gentlemen, my advice to you now is to do the best you can at once; your patient won't stand for the other. They want a rest after what they have been through, and not another operation.

And now a few words about dry labor and I am through. Suppose you have a patient who is dribbling the amniotic fluid during the last month of pregnancy; what are you to do? As far as I know, nothing, except to keep your patient as quiet as possible and await developments. No trouble may come of it, for you may have on your hands a practically normal labor. On the other hand, try to make ready for the worst, as you may have to confront the necessity of Cæsarian section. I have had experience both ways.

DISCUSSION OF DR. LAWRASON'S PAPER.

DR. O. D. WILLIS, Leesville: I want to relate my experience with one case of dry labor. I was called to see a woman when she was about six months pregnant. She had a very profuse discharge of what I considered at the time as the liquor amnii, and I found that my predictions were correct. I naturally expected that uterine contractions would set in after a while, as everything was doing well, and I left her alone. Uterine contractions, however, did not take place. The woman got along very well. I examined her from day to day, and found the child was still living, without question, and so I allowed her to go on. When she was about seven months pregnant, it being thirty-two days from the time, she had an escape of the liquor amnii. Labor came on, and I delivered her of a living child. The child is living to-day, and it is five years of age.

As the case was extremely interesting to me, and I could find nothing in literature like it, I thought I would mention it.

DR. LAWRASON (closing): I am glad Dr. Willis reported his case of dry labor. I have seen dry labor patients lose amniotic fluid for two months, and then have a normal delivery.

Again, in another case, the woman lost the amniotic fluid for two months, but in her case a Cæsarian section was performed. The patient went into labor suddenly, and, when I arrived, the hand and arm of the child were sticking out of the vagina. The child was crossed. It was a transverse delivery, and there was no amniotic fluid present. The uterus was in a state of tetanic contraction. I delivered this woman by means of Cæsarian section, and both child and mother lived.

DR. D. O. WILLIS, Leesville, read a paper entitled

Some Notes on the Pathology of Pregnancy and Labor.

In trying to present this subject I do not expect to revolutionize it nor produce any great or entirely new ideas but shall give my individual ideas on a few points of pathological conditions commonly met with in the general practice of obstetrics. I feel that this is a subject that will bear rehearsal, as our best writers differ very materially as to cause and effect in some of the more important subjects, as in eclampsia one will tell us that it is due to pathological conditions of the kidneys and another will tell us that it is due to pathological conditions of the liver; still another will attribute it to the nervous system, and so on. It is my opinion that eclampsia has quite a wide range of causes, as do pathological conditions of pregnancy. Foremost among the causes of the graver forms of this class of troubles, to my mind, is auto-intoxication. There is no doubt that kidney troubles do play a very important part in eclampsia, but where it is due to kidney trouble it is not always the same type of kidney affection, as I think the history of the two following cases will bear out:

CASE No. 1. Mrs. A., primipara, age 22. When she was about seven months pregnant her husband called on me at my office and said he thought she was passing too much urine, and it seemed to be nothing more than clear water. I asked him to bring me a specimen for analysis, which he did some days later. Analysis showed the following: Specific gravity, 1002; neutral reaction, no sugar, no albumen—in fact, a total absence of all the solids, as the specific gravity would indicate. I warned him of the dangers with this condition existing, prescribed for her, and did not see nor hear from her again until about five weeks later, when I was called about 4 o'clock in the morning to go hurriedly to her, as she was having convulsions. When I arrived I found she had had four convulsions and was unconscious. I gave her treatment, waited three hours, catheterized her and got sufficient urine for analysis, and returned to my office. Analysis showed practically the same as before, except that the specific gravity was 1006. I returned to see her that evening. She had had no more convulsions, but was still unconscious. I continued treatment, doing all I possibly could to arouse elimination. I was recalled to her

early next morning. I carried another physician with me. She was again having convulsions. After consultation we decided to deliver her, which we did as rapidly as we thought best. The baby never showed any signs of life. By the time she was from under the anesthetic her bowels had begun to act freely, and the urine was never so light any more. She went on to an uneventful recovery.

My experience is that this class of cases is more commonly met with in the primipara, and most likely the nervous tension has quite a good deal to do with it, but we cannot doubt that it is mainly due to the improper action of the kidneys.

CASE No. 2. Mrs. B., age 30, mother of two healthy children. I had cared for her during both of these pregnancies and confinements, and she had gotten along nicely in each case. When about seven and one-half months the third time she called me over the 'phone and told me that she was urinating very scantily and that it was very highly colored. I asked her to send a specimen of her urine for analysis. The analysis showed the following: Strongly acid; specific gravity, 1035; sugar and albumin in abundance; some ammonia; co-efficient, excessive urates and hyalin casts. I called her up and told her that her kidneys were in pretty bad shape, and she told me that she was feeling very badly, and I went to see her, and soon after I arrived she had a light convulsion, and was so dizzy for some days that she could not sit up. I was able to carry her to full term, however, and delivered her without any trouble.

Again, I have seen cases have convulsions where the kidneys seemed to be entirely all right, from both a pathological and functioning standpoint. I have seen one or two cases where I was positive that the pathological state was altogether in the liver, and some where thorough investigation failed to show anything except a toxemia; hence, the conclusion that we have a number of causes for this condition, and that autointoxication plays a very important part as a causative factor in these conditions.

I do not think there is any condition where we have more cause for autointoxication than pregnancy, owing to the requirements for the development of the fetus, and also a very large per cent. of the pregnant women gain in general flesh; breasts get larger, and there is more or less fat stowed up or deposited generally over

the entire body, and on account of these requirements the system is naturally called on to assimilate more and eliminate less, and it practically absorbs and assimilates everything it comes in contact with.

VOMITING OF PREGNANCY.—I have been very much impressed in the milder forms of this class of cases with the psychological phenomena. It has been, and is being, handed down to the young married woman that if she is pregnant, or if she gets pregnant, that she will surely have sick stomach, and so she does. But notice the unmarried girl that has not talked these matters over with the grandmas of the neighborhood, and does not know so well what to expect, and she gets pregnant, and I have never seen one of them that was nauseated enough that any one ever knew it, and I have never talked with one that had been nauseated enough to vomit any. But there is a class of these milder cases that have some real pathologic cause, and it has been impressed on me that most of these cases have some form of endometritis or dysmenorrhea. Of course, they do not all have. Many of them have malpositions, constricted cervix, the different flexions, lacerations, etc., but if we will consider that we most always have some form of endometritis or dysmenorrhea associated with these conditions, and inasmuch as we have the nausea with the cases of endometritis where we do not have any of these other troubles associated with it, I would rather attribute the nausea to the endometritis than to the other troubles.

The graver forms of toxic variety of these cases, I think, as in the eclampsia, are very largely a result of autointoxication. True, we have liver lesions in these cases, also other pathological conditions, but I can see no reason why pregnancy, without the absorption and retention in the system of poisonous substances, should cause acute yellow atrophy and other grave pathological conditions in the parturient woman.

There is one condition which I have had to deal with in pregnancy, or rather during confinement, that I shall give my experience with, as I have been able to find but very little in the literature about it, viz: apoplexy. It has been my misfortune to have two cases of this during confinement.

CASE No. 1. Mrs. C., age 23, primipara, went through gestation in perfectly good condition, so far as I was able to determine.

Secretions and excretions were all perfectly normal up to full term. I was called about 10 o'clock at night. She had been having some slight pains about 4 P. M. As I had had some other work to do, I did not get to her till after midnight; found her doing, as I thought, nicely; some cervical dilatation. As they lived about three miles in the country, I remained with her. At 7 A. M. cervical dilatation was complete, and I naturally expected to soon be through. Had not given her anything at all. I had noticed, though, that the pulse was just a little rapid and full, but not enough to cause any alarm at all. Just as the head was being pretty well engaged, all at once she relaxed and became perfectly limber. Her breathing became rapid and stertorous; her eyes were closed. I opened the left eye and the pupil was pin-point in size. I opened the right one; it was dilated as large as I have ever seen one. I concluded at once what I had to deal with, and applied instruments and delivered a living child, and in a very short time cleared her. Appropriate treatment was applied as rapidly as possible, but she died within half an hour.

CASE No. 2. Mrs. D., age 43, mother of seven healthy children. While delivering her of her eighth child, just as we completed the delivery of the head I noticed her breathing was bad. After investigating I decided that I had another case of apoplexy to deal with. I finished delivery at once; had quite a loss of blood, which I did not attempt to check until I thought she had lost about as much as she would safely bear. She had a complete right side paralysis, of both motion and sensation. She gradually cleared up, and at the end of six months she was practically normal, at which time she had another rupture at the same point and died in about forty-eight hours.

Hoping that these few lines will be of some help to some one, and that this will succeed in drawing out some discussion on these subjects that will be of interest and help to me and others, I leave it now for discussion.

DISCUSSION OF DR. WILLIS' PAPER.

DR. JAMES A. NEILL, Alberta: I wish to tell the members of the Society of a mistake I made. Six years ago I was called at 12 one night to see a primipara, and found her sick at the stomach.

Her time was within two or three weeks of being up. She had eaten cabbage for supper. I gave her apomorphia and a good dose of calomel, ten to thirty grains, to be followed with salts, q. s. I then went home and went to bed. At 1 or 2 o'clock I received a message to come quick, that Alice was having fits. I gave her chloroform to control the fits, then I called for a little water, sterilized my needle as best I could, opened my case and found I had Fleming's tincture of aconite and Norwood's veratrum viride side by side. I reached for the veratrum, as I thought, but got the wrong bottle. I did not know it at the time. I shot in fifteen minims before I withdrew my needle, and then found out that I had made a mistake. I thought the woman was going to die, and I thought I had killed her. I began to do what I could to counteract the results. I controlled the convulsions with chloroform and sent to my office to get all of the quick-acting stimulants I could, but never said a word about the mistake I had made, and tried to bury it as best I could. However, I found that I could not bury my mistake, and I decided to stay and await developments. She slept quietly, and so did I, until about 6 o'clock, when I got up, and there was a normal labor. She had a weak and frequent pulse, which scared me. Well, I said, I cannot do anything but give a little strychnia hypodermically; if she dies I cannot help it. I do not have occasion to use Norwood's tincture of veratrum very often. That woman is well and living to-day. I could not bury my mistake, but, gentlemen, I have been caught on such occasions some three or four times, and it is a critical period with me when I am by myself; I want somebody to share the responsibility.

DR. CLARENCE M. TUCKER, Haughton: The paper presented by Dr. Willis is interesting to the country practitioner. Talking about eclampsia as one of the pathological conditions, as country practitioners we do not see this condition very often. He emphasizes the fact that very frequently in making a urinalysis, instead of finding albumen, we find it normal, yet the woman has an eclamptic condition, and he believes that it is dependent more upon absorption from the toxemia of pregnancy than from the kidney lesion. I have found, in the limited number of cases of eclampsia which I have treated in the last twelve years, that 99 per cent. of the eclampsia I encounter among the pregnant women

in practicing out in the country is not dependent upon albuminuria, nor upon any kidney lesion; that urinalysis is practically normal every time. We are called in a hurry, because the woman is having convulsions, and we find from the history that she has been constipated during the whole time of pregnancy, and that she has tried to keep her bowels open with liver medicine or something else. I have attributed the condition of these women each and every time to toxemia or to autointoxication caused by absorption from the bowel, and to control the convulsions at that time I have given a good dose of calomel, followed by oil or salts, and they get well.

The essayist spoke about the vomiting of pregnancy. I have had very little experience with the vomiting of pregnancy. A fellow-practitioner referred a woman to me the other day who was four months pregnant. The history showed that she had vomited continuously since the third week, and that she had suffered intensely from headache and vomited everything. I gave her iron, quinin, strychnia, with aspirin, for her headache, and she has vomited but once since.

DR. D. O. WILLIS, Leesville (closing): I wish to thank Dr. Tucker very kindly for his corroboration of the point or two he spoke of in connection with my paper.

In reply to the remarks made by Dr. Newton with reference to my not citing any cases to bear out my theory of autointoxication being a cause of eclampsia, I gave positive evidence of the cases reported that the eclampsia was caused from kidney trouble, but I stated in connection with that that I had examined women repeatedly who had eclampsia or convulsions of an eclamptic nature without doubt. There was absolutely nothing I could find to indicate anything else. The secretions and excretions and everything were perfectly normal, with the exception, possibly, the bowels were a little sluggish or did not move as freely as they should, and this theory is backed by the fact that we have no condition which gives more cause for autointoxication than pregnancy, on the ground that we have such a call on the system for more supply, that these women do not eliminate in proportion to the absorption or intake.

The Business Side of the Practice.

By R. P. JONES, B. S., M. D., Clinton, La.

This paper has two distinctive features: One is that it is the first paper to be read before this body without special invitation, and the other is it contains no medicine. It is written not only without special invitation, but purely from a sense of duty. Every other member has done his part to make our Society a success, and I could not afford to shirk; it contains no medicine because there is no medicine in the subject I propose to discuss.

If you will pardon the frequent use of the personal pronoun, I will say that I came from a family of doctors, having uncles on both sides of the family who were doctors, my father was a doctor and my grandfather is still in harness after having been in active practice for more than a half century. You will acknowledge that, being so intimately associated with doctors from the cradle up, I have had an unusual opportunity to see and learn some things about the business end of the game early in life. In fact, during the first eighteen years of my life, most of my spare time was spent in presenting the bills of my father and grandfather. I say presenting bills, as I seldom collected them. It was some times a hard matter to find these debtors; I frequently had trouble in convincing them that the bill was just and due, but my greatest difficulty was to get the money.

Although my father was far above the average, was a man of great personality, did a tremendous practice and had no bad habits, still when he died he left nothing but thousands of dollars of accounts on his books which were not worth ten cents on the dollar. Being brought up in this environment, seeing him daily for years and years working his very life out for the people who could, but would not, pay him, I formed a resolution, even before I had read Gray, that, should I ever be licensed to practice medicine those receiving my services would pay me, and pay me well, unless they be worthy objects of charity. This resolution I have broken many times.

One of the first requisites for a doctor who wants to conduct his business according to business methods is to have a good, substantial book in which to place his accounts. I have a loose-leaf

* Read before the East Feliciana Parish Medical Society, and published by their request.

ledger, which cost me \$40, in which I post my accounts every day and lock in a fire-proof safe. While the first cost of this book is rather high, it will last a life-time, and the loose-leaf feature allows one to discard all dead or closed accounts, while the special index feature is a great saving in time. The average doctor keeps his accounts in a thirty-cent single-entry ledger, often using a pencil to make his entries, and seldom posting more than once in two or three months, so that, when he is asked to send a bill, the trouble to look back over his day-book (if he has one) is worth more than the bill. I find that, by posting every day the work you have done before, it is an easy job; it can be done in five minutes, and then your books are up to date and it is an easy matter to send any bill at once; whereas, if you allow the work to accumulate for even a few weeks, the task is so large and so tedious that one feels he would almost rather lose the bill than to do so much posting. It is seldom that my books go two days unposted, and I do not think they have ever gone three days unposted.

Another important item: I always itemize my bills. People want to know for what purpose they pay money; they want to know what that spell of Johnnie's cost; what you charged for that case of diphtheria, or for incising that abscess, and, since it is their right, I always send an itemized account. Should I meet a patient and he asks for his bill my first act upon reaching the office is to make it and mail it to him. "Short payments make long friends," and when a man asks me for his bill he gets it. I do not put him off with, "That's all right; I'll send it to you; there's no hurry"; but he gets it that day, and when I meet him I always ask him if he got it.

And this brings us to the subject of collections. I have made this subject a special study, although I live in a country where we depend on cotton. Even under boll-weevil conditions, and where the dead-beats and the liars are plentiful, I have never failed to get 90 per cent of what I have made, and I have more than once gotten 98 per cent in cash for the entire year's work. My books will show that last year (and you all know how hard it was last year) I collected 96 cents for every dollar that I booked.

Debtors may be divided into four classes. First, those who will pay you sure (all they need is to have a bill mailed to them);

second, those to whom you must send a bill and request payment; third, those whom you must see personally and keep after till they pay, and, fourth, those who will not pay at all. The last class I have no dealings with. The only collector I have ever had is the United States mail. I find this the easiest, the most dignified, and really the best way to get your money. Many people object to having a collector dun them; a few think it is like taxes—it adds to the cost if it has to be sent for—and a few more take it as an insult and will not employ a physician who has a collector. I do not mean to say that I simply mail my bills and make no further effort to collect them; I frequently go to see them personally, especially this third class. I tell them kindly but firmly that I must have my money; that when they needed me I did not hesitate, and that now I need their assistance and they must come across. In nine times out of ten I either get the money or some definite time is fixed for settlement. Some of my patients insist on giving me hay, corn, potatoes, pumpkins, hound pups and molasses instead of money. This I will not stand for. I tell them that I am not a corn doctor, that I cannot pay office rent and grocery bills with hay, and while, of course, I prefer even a hound pup to nothing, still I find plenty of people who have the money, but are only waiting for a chance to palm off any old thing on the doctor and keep the money themselves. The few times that I have allowed them to settle that way, the corn has been nubbins, the molasses sour and the hound pup a cur. Besides, it lowers our professional standing to accept chips and whetstones from people who are able to pay money.

Occasionally I meet the fellow who always complains of his bill—it's too big; Dr. A. only charged him \$3 a visit and I have charged him \$5; that I am high-priced. I always agree with him. I tell him: "Yes, that's true, I am high-priced. All good things come high; that I have nothing to do with the charges of Dr. A. I suppose Dr. A. charged him all he thought his services were worth, and that when I do the work I always reserve the right to set the price. If you agree with him there is no room for argument." He pays the bill, and the next time he is sick your team will be found in front of his home.

As to suing for a bill, having recourse to the courts, etc., I have never done that but once. Very much against my will I treated a

transit man (transits are poor pay; shun them), a drummer for patent medicines, 65 years old, five feet high, weighing 190 pounds, an Englishman—one of those but-cut fellows, with a pendulous abdomen and a short neck. He had a carbuncle right on the back of his neck, sloughing out a piece as large as a soup-plate; was delirious for three weeks, desperately ill for six weeks. Upon his recovery his house paid every bill but mine. The druggist, the nurse, the hotel, the washwoman, the livery man, even to the sheets and bed linen which he had ruined by the discharges from his neck, were paid for; but the doctor's requests for money were treated with the most silent contempt. I brought suit in a distant State, the domicile of the house; sued them through three courts and collected \$478, including attorney's fees and nineteen months' interest. This was just luck, and I do not advise law suits.

The next thing a real doctor should have is a real nice, airy, clean office, centrally located, well kept and furnished as well as his means will allow. After he gets that he should stay in his office, and not hang around the drug store talking politics and cussing the country. If possible, do not have the office at your residence; if you do, many times you will come home just at dinner-time, tired, hungry and mad, only to find lined up on your back porch awaiting your return two ladies from the country whom your wife has done her best to entertain while she attended her household duties, and two buck negroes, one with the syphilitic eruption on his face and the other stinking up your back premises with the iodoform from the ulcer on his shin. This is not pleasant; these people have been waiting for you since early morn; you want your dinner, but they don't think you ought to eat. The ladies will have to be invited to dinner, and, of course, this is the very day the cook is off and the wife has been put to extra trouble on account of their presence. On two occasions I have known a doctor to come home only to find sitting on his back gallery a negro man with the characteristic pustules of smallpox on his face, complacently awaiting his return, while the doctor's wife and children were passing and repassing him, totally oblivious of the danger. Another reason: the world is full of ladies who have to consult physicians, who have to undergo local treatment, and they dislike to go to the doctor's residence for that purpose. Young men, as well as old men, sometimes have gonorrhea, chancre, chancroids, and they prefer the doctor with an office uptown.

This reminds me of venereal practice; I do not cater to it; I do not like it, but I have qualified myself to treat it, which I do every day. The only difference I make between these patients and others is that when a man comes to me with gonorrhea I promise him only two things—that I will do my durndest to cure him, and that I will charge him \$2 every time he comes, and, unless I know him to be A-1 pay, I require him to pay me in advance. I never allow a man to beat me if he has gonorrhea. Some one has said that all syphilitics are liars; I think this will apply to those having gonorrhea as well. An other thing I will not do, I will not prescribe for any one on the public road or in the street; I tell them that I cannot do justice to them or to myself, that I do not want to shoot in the dark, to come to the office, where I can make a thorough examination and it will be more satisfactory to us both. About half of these patients never come. Now, as to case histories, for years I thought this was for the city man; I saw no sense or use in it for the country man; but for ten years I have used a case history blank of my own which I had the local printer to make for me, and I could not do without it. It is a card, 4x10 inches, which shows the date, name, age, address, color, sex, civic condition, family history, pain, location, amount, duration, character, size, the condition of the bowels, tongue, skin, kidneys, pulse, temperature, weight, appetite, sleep, digestion; and for women, menstruation, number of children, miscarriages, with space for my diagnosis and treatment. You have no idea of the value of this little card till some day a lady walks in to the office saying she has had that same pain she had last spring, "that same old trouble," and that she came to get some of that same black medicine and some more of those white pills, "they did her so much good," etc. You may rack your brain, but, if you have the same kind as mine, for the life of you you cannot remember just what she was complaining of last spring, nor have you the remotest idea what that black medicine was nor the composition of those white pills. With the case history it is an easy matter to reach up and get it; turning to her card you see at a glance every detail of her previous illness, what she complained of and what you did for her, besides it helps you for the patient to see that you have kept a record of her troubles, that you have made note of her symptoms, and that you seem to know so much more about her and her condition than any other doctor.

I think a doctor should drive the best team he can afford. When he gets a call answer it and go in a hurry, it gives you more time to attend the next or to read up on the one you have; do not be in a hurry in the sick room, but as soon as you are in a position to prescribe do so and leave; don't accept invitation to dinner; don't loaf and gossip with the family; attend to the work, do what is necessary; give all directions in writing and then leave.

I never talk about a brother physician to a patient nor will I allow a patient to talk to me about a physician, and when a man comes to my office and begins by saying ugly things about his doctor, and how much money he has paid him, I always require him to pay me cash; I know he owes the other fellow and is now getting his guns ready for me. Another little pointer I have picked up, and one that I neglected to mention when on the subject of collections, is the use of rubber stamps. I have three, costing only a few cents apiece. The first one I use on the first bill is as follows:

"When you send for a doctor it is because you need and expect him to come. When he sends you his bill it is because he needs your assistance and expects it."

No. 2 reads:

"If you send for a doctor twice in succession you would be in great need of him, and would think hard of him if he neglected you under such conditions. This is your second BILL."

No. 3 reads:

"When a drowning man goes down for the third time his friends have lost the last chance to save him. This is my third appeal to you to treat me fairly. Don't drown a good friend."

The use of these will some times bring results when nothing else will. These, my friends, are a few of the pointers I have picked up in a practice extending over a period of fifteen years; many of them have helped me to earn an honest dollar, and I believe they will help you to do the same. By a few people of this community I am considered hard-hearted, a few more think I have lost all the milk of human kindness, and yet I do more than my share of charity practice every day of my life. I frequently spend an entire day working for people who cannot pay and whom I never put on my book; but I do absolutely refuse to work for the fellow who can but will not pay. The laborer is worthy of his

hire; the Good Book says he who fails to provide for his own is worse than an infidel, and surely we do have certain obligations to fulfil towards those dependent upon us. We are not all millionaires, and personally I have to collect my own bills or I cannot pay those whom I owe, and, as Dr. Abbott puts it:

"Here's to the doctor,
 Who is always on the job;
 Who is square, not from policy, but from principle;
 Who never slights the minor ailments, nor surrenders to the major ones;
 Who never neglects a single patient, little, big, rich, or poor;
 Who is courteous to all, because kindness is in his heart;
 Who acts quickly and decisively in emergency, but never thoughtlessly;
 Who pushes for business in the dull season—for more business in the busy season;
 Who is incessantly searching for more useful knowledge, striving for finer skill;
 Who pays his bills promptly, and requires just and prompt payment from others;
 Who will fight for every life, if need be, to the very brink of the grave, and in so doing is big enough, brave enough, broad enough to leave unstudied and untried no measure nor medicine that may help him in that, his one great end."

Miscellany.

ON SPITTING.—The practice of spitting is so universally condemned by sanitarians, and its *rôle* in the dissemination of such diseases as tuberculosis is so familiar to every school child, that it really seems as if some other point of view must be taken before the practice can be abolished. We know that spitting endangers our own health and the health of our fellow human beings—and still we spit. Conspicuous signs in public buildings, conveyances and other places are ignored, in spite of the dire warnings implied in their wording. The traveler even seems to resent any suggestion in the matter. He (it is, confusion be upon the sex of the present scribe, always a *he*) even seems to look upon the inborn right to pollute public places with his sputum as a mark of individual liberty and dignity. After the manner of the independent individual in the Bon Gauthier Ballads:

"Like a free American,
 Upon the floor he spat."

The thesis of this essay is that spitting is indecent. We are all

agreed that it is unhealthful, and are continually informed that it is illegal. Let us, as a nation, inculcate the idea that, as a social usage, it is indefensible.

It may be taken as an axiom that it is unnecessary for a healthy person to spit. It is likewise indecent for one human being to absorb the excreta of another. Thus, it is plain that it is unethical to force one's saliva upon others, especially upon ladies, whose clothing renders it impossible for them to escape the pollution of floors and streets, and who (blessings on them!) do *not* expectorate.

The plea that tobacco-users should be allowed special expectorative privileges is puerile. The writer remembers, in this connection, a conversation between an Oxford gentleman and his son. The latter was apologizing for spitting, and his father replied, "A gentleman ought not to spit. If smoking makes you spit, don't smoke."

The sin of spitting, it must be acknowledged, is peculiarly an American one, and the attitude of refined and intelligent foreigners toward the practice should be a source of humiliation to us. Dickens' disgust, so caustically enunciated in the tale of Martin Chuzzlewit, was not exceptional save in the cutting expressions by which it was announced. Such rebukes are not to be resented, because, in persons of esthetic sensibility, the habit must of necessity always induce astonishment and repugnance. This is doubtless because escape of saliva suggests a species of incontinence to be compared with fecal or vesical incontinence.

From earliest times salivary uncontrol has been ranked as a weakness. No one could wish to be

"Forced to drivel, like some paraliticks or a fool."

(GREW, *Cosm. Sacr.* i, 5.)

Then, why drivel voluntarily?

Again, spitting upon a person has always been deemed a deep insult. Many classic, Scriptural and modern instances might be cited. For example, over a dozen references in Shakespeare point to spitting upon or at a person as an insult (c f. *Troilus and Cressida*, i. 3). It is hard to see much difference between such an act and that of depositing spittle all around one so that it is difficult or impossible to avoid its contact.

It may possibly be comforting to the moralist to reflect that the

spitter suffers along the with victims of his unsanitary and vulgar practice. As runs the Spanish proverb: "*Quien al ciel escupe, a la cara se le vuelve*" ("He that spits against heaven, it returns into his face"). Nevertheless, as every conceivable argument bears against, and none for, the detestable habit, let us (to paraphrase rather flippantly the fine description of one of the noblest characters in history) each strive to be "a *spitless* gentleman." C. W.

THE PRINCIPLES OF INTERNAL TREATMENT WITH IODIN IN COMBINATION WITH FATTY ACIDS.—Loeb & Van Der Velden (*Therap. Monats.*, 1911, xxv, 209) say that lipoiodin from a theoretical standpoint is the best of the many combinations of iodine and the fatty acids—such as sajodin, iodifin and ioidal. Lipoiodin is gradually absorbed and is eliminated much slower than other similar preparations, and thus secures a more permanent deposit of iodine in the body tissue. The remedy seems to have an especial affinity for nerve and fat tissues. It is well borne by the stomach, and does not produce the symptoms of iodism, although its therapeutic effects are well marked. J. A. S.

THE ACTION OF FIBROLYSIN.—Mendel (*Therapie d. Gegenwart*, 1911, lii, 155) reviews the work of other observers regarding the action of fibrolysin, together with his own personal experiences. He says that this remedy has a specific action in promoting the absorption of scar tissue of every description. He speaks particularly of its good effect in the treatment of arthritis deformans. Untoward by-effects are very infrequent. A febrile reaction occasionally results from an injection of fibrolysin, and is due, according to Mendel, to anaphylaxis. Mendel suggests that fibrolysin may be given in the form of suppositories in suitable cases.

J. A. S.



HOWARD C. SMITH.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

HOWARD C. SMITH.

The friends of the JOURNAL will join us in an expression of sorrow at the death of our business manager, Mr. Howard Curtis Smith, on January 12, 1912. For fully twenty years he had been a part of the life of the JOURNAL, and his interest in its welfare at all times added to the prosperity of the publication. Always affable, full of a personality which touched his casual and older acquaintances with a magnetism all its own, Smith had a glad hand for all. Even when the shadows of the coming end were cast over a bright and cheerful disposition an accustomed optimism built constantly a haven of hope, which everyone but himself saw could never be reached.

He died in his 57th year, and we must write of him that he was always a good friend, a faithful servant and a follower of the sunny side of life, spreading the beams of his own cheerfulness for the sake of others.

To his devoted wife and the relatives who survive him the JOURNAL wishes to extend the profundity of a sorrowful sympathy.

The Teaching of Obstetrics in the United States.

Under the caption of "Medical Education and the Midwife Problem in the United States," J. Whitridge Williams, in a recent paper (*Journal A. M. A.*, Jan. 6, 1912) handles the present teaching of obstetrics in this country without gloves. The interesting

part of the paper is that the conclusions and criticisms are based upon deductions drawn from the statements of teachers themselves, identified with forty-three schools in this country. There appears to be a general confession of inadequacy not alone in the instruction afforded, but in the preparation of the teacher himself.

The reader of Dr. Williams' paper must be interested in all the matter contained and especially in the summary—but some may be led to different conclusions.

The particular point is emphasized that the professor of obstetrics should be fully qualified and his qualifications should include the capability to do obstetric surgery when needed, in emergency and otherwise. A strong undercurrent of argument is made for the combined gynecologist with the obstetrician in the teacher, the wider the experience the better the teacher.

That the medical schools in this country are deficient in the clinical material is as deplorable as it is true, but it is not altogether the fault of the individual professor of the branch, often submerged in his degree of usefulness by the ambition of the surgical side of the faculty and suffering in equipment and in maintenance of his division.

The ungrateful life of a practitioner limiting his practise to obstetrics and the burdens born of an abandoned rest have made this special calling a less attractive one than those which let the night repair the weary body after a tiresome day. More than this: Few medical colleges offer to the magnanimous professor such a stipend as to warrant the surrender of an outside living which compensates for the time spent in charity and field work in obstetric practise.

It is all very well to make a cardinal recommendation that the problem of better education will be accomplished if the number of medical schools is reduced and more adequate facilities afforded those surviving, but we are still awaiting that spirit of philanthropy which will underwrite such a project!

Of much more practical and sound value is the advice that medical faculties and hospitals should give more attention to obstetrics. The former has the means to develop the group of teachers who should be properly qualified to train the student and the latter can usually afford the clinical field for such work.

Another point of emphasis presented is the power possessed by

State examining boards to make it obligatory upon applicants for license to show evidence of proper training in obstetrics; here really lies the way in which the teachers may be brought to task.

The final conclusion of Dr. Williams is more than apt—that midwives in large cities should be relegated and their places taken by obstetric charities.

The observation of the ordinary *sage femme* conveys anything but an appreciation of a wise intelligence and the calling of the midwife, in the South at least, is followed by a class of women too ignorant to become trained nurses and not wise enough to know their own ignorance. We need only to refer to the type of midwife which Upton Sinclair pictures in the "Jungle" to think of the possibilities of this class, elsewhere.

Dr. Williams has done a good work, and it needed the pen of one who is both educator and surgeon to write so trenchantly of his subject. The fact that only forty-three among one hundred and twenty teachers replied to inquiries sent them fairly well indicates the apathy among the teachers; the condition of those who did not reply may be surmised from the conclusions drawn from the information afforded by those who did reply. It is to be hoped that the result may follow which will make for a better standard of college, hospital and community appreciation of the needs of better obstetrics by men and institutions better qualified.

Meeting of the Southern Section of the American Laryngological, Rhinological and Otological Society.

New Orleans is again to be honored by a convention of medical men, on February 16 and 17, at the rooms of the Orleans Parish Medical Society, No. 141 Elk Place, and the general profession is invited.

This special association has four subsidiary divisions, Eastern, Middle, Western and Southern, with various dates of meeting during the year.

New Orleans has always been a medical center and offers exceptional opportunities for gatherings of this sort, and the usual hospitality of the Crescent City will prevail. The JOURNAL joins the local profession in bidding the visitors to this meeting a cordial welcome.

A good representation is expected, and the program includes papers by a number of notable men, among whom may be named Drs. Hudson-Makuen of Philadelphia, J. A. Stucky of Kentucky, W. L. Ballinger of Chicago, E. Fletcher Ingals of Chicago, Wm. B. Mason of Washington, Wm. Freudenthal of New York. Drs. Dupuy and Weil of New Orleans are also to contribute papers.

The sessions will be under the Chairmanship of Dr. Otto Joachim, the Vice-president of the Association and the official Chairman of the Southern Section.

The addresses of welcome will be delivered by Dr. Isadore Dyer, for the medical profession, and by Dr. E. H. Walet, as President of the Orleans Parish Medical Society.

Abstracts, Extracts and Miscellany.

Department of Obstetrics and Gynecology.

In Charge of DR. P. MICHINARD and DR. C. J. MILLER, New Orleans.

RELATION OF THE APPENDIX TO THE CAUSATION AND SURGICAL TREATMENT OF AFFECTIONS OF THE ADNEXA.—H. Macnaughton-Jones (Proc. Roy. Soc. Med., 1911, 4, Obst. and Gyn. Sect., 341), states that in a fairly large proportion of affections of the internal genitalia, both the appendix and the adnexa are involved in the inflammatory or morbid process. The inflammation may spread either from direct contact of the appendix, with the adnexa through the peritoneum, the lymph channels, the appendiculo-ovarian ligament, or such a structure as that described as the appendiculo-ovarian ligament. Infection from the appendix to the adnexa has to be more especially feared when there is an appendicial abscess with gangrene or tuberculosis, and from the adnexa to the appendix when there is right-sided pyosalpinx, malignant disease, tuberculosis, or gonorrhea. Such a complication has to be remembered in the puerperium. The differential diagnosis as between appendiceal and adnexal inflammation, whether acute or chronic, must depend on the preponderance of the classical signs and symptoms charac-

teristic of each which are present, the earlier history and progress of the case being taken into consideration with these. Kelly quotes R. T. Morris as placing abdominal rigidity foremost in the clinical signs indicative of appendicitis. Still, it is clear that in a spreading perimetritis, in which the appendix is secondarily involved, this test must be fallacious. An acute inflammation occurring in a young person, in which there is ambiguity as to its seat, will, in the majority of cases, be due to appendicitis. The fact that it is the left adnexa which are found diseased does not exclude the possibility of this complication, though it is more frequent when those of the right side are affected. The appendix, therefore, should be examined in every case. When the abdomen is opened for a grave appendicial trouble the adnexa should be examined. Appendical adhesions are a frequent cause of postoperative and recurrent pains. The appendix should be removed in every instance where abnormality or disease is found. It should not be left if it be of unusual length, when the right adnexa are removed, or when, from the character of the operation, there is a probability of future adhesion forming which may involve the appendix; indeed, it is doubtful if it be not wiser to remove it in every celiotomy for right adnexal diseases. Operative action arising out of these conclusions will always be dependent upon the severity of the operation, and the influences its prolongation may have in lessening the chances of the patient's immediate recovery.—*Amer. Jour. Obst.*

MILLER.

PATHOGENESIS OF HEMORRHAGES OF THE NEW-BORN.—E. L. Bonnaire and G. Durante (*L'Obstet.*, October, 1911), have observed at short intervals, in the same maternity hospital, four cases of hemorrhage in new-born children, with death due to peritoneal inundation. In the liver, ecchymoses and small hemorrhages into the tissues, interstitial and subcapsular, are frequent, especially in the course of infections. These, while clinically latent, are found at autopsy, causing only secondary symptoms. Hemorrhages causing death are rare. Besides predisposing lesions there must have been present congestive phenomena and a peculiar fluidity of the blood.

Out of 5,000 autopsies in the new-born, only one example was found in ten years. After giving the histories of the four cases

observed, the authors state that each liver was in a different stage of alteration and degeneration, forming a series. The capsule of Glisson was thickened and infiltrated; the parenchyma was infiltrated with small cells; the hepatic cells were altered; and the blood vessels were changed so as to predispose to hemorrhage. The hemorrhage was abundant enough to fill the abdominal cavity. It came from the rupture of subcapsular hematomata, some important vessel being opened. Bacteriologically, in three cases they found an encapsulated diplococcus, colored with Gram stain. It was found in the liver parenchyma near the hemorrhagic foci. We find thus an inflammatory hepatitis caused by a slow infection of the biliary passages. The authors suggest that this was an epidemic of such hemorrhages, all arising from a common cause. Predisposing causes are hemophilia, syphilis and intoxication. The writers sum up the causes of infection; under the influence of a chronic infection or intoxication of the mother there are vascular lesions of the liver with degeneration, lessened fibrinogen and diminished coagulability of the blood. At birth an intoxication takes place due to germs, with polyglobulia, leukocytosis, and congestion. The altered capillaries and vessels rupture. Hemorrhage continues due to failure of the blood to coagulate, and death ensues. At the time of these cases there was an epidemic of gripe in the city.—*Ibid*.

MILLER.

MALARIAL FEVER IN ITS RELATION TO PREGNANCY, LABOR AND THE PUERPERAL STATE.—Amedee Laffont (*L'Obstet.*, September, 1911), says that malarial fever may influence pregnancy throughout its course; fecundity is lessened, abortion is often caused by the acute attacks, and premature labor by the chronic stage. When treated, labor may go on to its normal ending. The exact cause of the premature expulsion of the fetus is unknown. Study of the effect in producing eclampsia is as yet not completed. It is undoubtedly transmitted from the mother to the fetus; congenital or hereditary malaria may occur according as the poison acts on the fetus or the embryo. Fetal malaria is proven by the finding of the parasites in the blood of the fetus and by the occurrence of typical attacks of fever, which sometimes occur in the uterus. Hereditary malarial fever may be, immediately after birth, acute, chronic or latent; the diagnosis of the last is made by the micro-

scope, and only after several months will typical attacks occur; this explains the possibility of belated hereditary malaria. Tertian and quartan forms are transmitted most frequently; rebellious attack with frequent paroxysms not affected by quinin are not always the ones that are transmitted; benign cases may be as well transmitted to the fetus. The infection is more likely to be transmitted when it occurs during the last three months of pregnancy. The absence of parasites from the fetal blood is not positive evidence of the absence of malarial fever. It is impossible to tell why the parasites are transmitted through some placentas and not through others. In many cases the full-term child of a mother affected with malaria is weak and under weight, and rarely is it absolutely healthy. In rare cases it may be malformed. There is no characteristic lesion of the malarial placenta. Pregnancy does not prevent malarial fever nor is it a predisposing cause of it. A woman who has had malaria may have a recurrence of attacks during pregnancy. Malarial fever if chronic when pregnancy begins may become pernicious as pregnancy advances. Malaria causes a predisposition to hemorrhage at the time of labor, generally not severe; artificial extraction is not rarely required. The influence of malaria on the puerperal condition is marked; immediately after labor the temperature will be subnormal; uterine involution is slow; the lochiæ are sanguinolent and prolonged; there may be intermittent hemorrhages. The milk is modified in acute and chronic malaria and suppression of lactation is necessary. The milk will not transmit the parasite. A recrudescence of malaria will generally occur before the tenth day; it is not clinically characteristic; it may be modified in the character of the remissions and in gravity; its prognosis is relatively good. Diagnosis may be made by the use of the microscope. Quinin may be given with impunity.—*Ibid.*

MILLER.

Department of Internal Medicine.

In Charge of DR. E. M. DUPAQUIER, New Orleans.

PRACTITIONER'S NOTES. In these days of proficiency in special work, the practitioner has, yet, to take the part of the psychiatrist quite often. Families for many reasons will treat, at home, and

hide their unfortunate loved ones who are mentally affected, resisting, at first, the friendly advice of the family physician to commit the patient to an institution for the insane. The good doctor's emotional pith is strained to the extreme and he yields, of course, until circumstances force the unavoidable upon the grieved family.

In the meantime the practitioner must take the place of the psychiatrist.

Now, here is a case of melancholia. The patient must be kept quiet and asleep, he dreads all sorts of things, speaks of killing himself and he means it, too, he refuses food and cannot sleep.

Since 1902, after Clausse's observations, it is current good practice to use the phosphate of codein in such cases, from 10 to 30 centigrams, in the course of the afternoon. This procures a quiet sleep.

The white crystals of codein phosphate, containing 70.51 per cent of codein, are very soluble in water (1 to 2), and ought to be substituted for codein owing to its remarkable solubility. Instead of giving it in pills, a solution of 2 per 100 in cherry-laurel water can be easily made, and from 15 to 50 drops can be given. It is best used by needle (Ten centigrams).

The writer had used codein phosphate in similar cases as the one referred to here. But, in this instance, quite recently the writer had the opportunity of testing the new remedy pantopon, a liberal amount having been sent him on request by the distributors in New York.

Pantopon, says the literature, is made for the medical profession, only. It is a new and ideal preparation for the administration of opium, exhibiting all the alkaloids of the drug, combined, in the form of their soluble hydrochlorides. It makes a clear solution in water and is therefore suitable for hypodermic use.

Its originator and sponsor, Sahli, the famous head of the Medical Clinic of Berne, is sufficient guarantee to believe in what is claimed for it, *a priori*. But, then, in testing new remedies we must be true and sincere in our own observations.

In testing its efficacy recently, to procure quiet sleep in a case of melancholia, the writer found that the Clausse remedy is certainly far superior. The writer is aware that in melancholia others have found it to lack efficacy, while they found it most useful in depressed conditions with motor tendency, agitation.

The writer intends testing pantopon, and compare it with opium and its usual alkaloids, in the many conditions where the latter are known to be of great value, and upon these observations notes will be taken and inserted, here.

E. M. D.

Department of Therapeutics and Pharmacology.

In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

THE ACTION OF IPECAC AND OTHER DRUGS IN DYSENTERY.—From time to time we have published in the Original and Progress Columns of the *Theapeutic Gazette* records of the excellent results which follow the proper employment of ipecac in the treatment of tropical dysentery, and also have called attention to the fact that this drug has been used successfully for the purpose of preventing the hepatic complication of this disease. Up to the present time all clinicians who have had large experience with this drug in this disease, however, have frankly admitted that they were unable to explain its action. In other words, their employment of it has been purely empirical.

In the *Bulletin* of the Manila Medical Society for March, 1911, we have read with much interest an investigation carried out by Captain Edward B. Vedder, of the Medical Corps of the United States Army, in which he endeavors to discover the manner in which ipecac produces its results. He notes the fact that while some persons consider it practically a specific, others have obtained results by no means so valuable, and he suggests that this difference in result is perhaps due to the fact that the drug has been employed indiscriminately, not only in bacillary and amebic dysentery, but in cases due to other causes. In other words, as he puts it, no one doubts the efficiency of diphtheria antitoxin, but we are not so unreasonable as to expect it to cure all kinds of sore throat. Then, too, it is possible that different preparations of ipecac and different samples of this drug may vary materially in therapeutic power.

In Vedder's experiments he endeavored to find whether ipecac had any decided action against either the bacilli of dysentery or

such amebæ as can be cultivated, and compared its influence upon these two causes of the disease with the effects of other substances which have some reputation as remedies, notably quinin and silver nitrate. He also controlled his investigations by studying the effects of digitalis, hydrastis and opium upon cultures of these micro-organisms, and finds that ipecac when present in the strength of 2 per cent of the fluid extract, inhibits the growth of dysentery bacilli, but that the action is not specific, since ipecac also inhibits the growth of other bacteria, and, furthermore, hydrastis and digitalis are quite as powerful as ipecac in inhibiting the growth of these bacilli. In conditions which exist in a case of dysentery there is reason to believe that ipecac is never present in the intestine in as strong a solution as 2 per cent of the fluid extract. So far, therefore, no evidence has been adduced that ipecac acts in bacillary dysentery as an antiseptic or germicide.

When, however, Vedder proceeded to a study of the influence of ipecac upon the amebæ he found that the drug was much more powerful. When amebæ were grown in a 5 per cent bouillon culture they were always killed by fluid extract of ipecac in a dilution 1:50,000, and sometimes were killed by such high dilutions as 1:200,000. Using, however, another sample of the fluid extract of ipecac, it was found to be far less powerful, and an analysis of this comparatively impotent specimen showed it to contain half the total alkaloid per 100 cc. which is required by the standard set by the United States Pharmacopœia. It became evident, therefore, that for further experimentation ipecac of the standard strength must be employed, and careful tests were made to determine the strength of all samples before the experiments were carried further.

Vedder concludes from the studies which he made with standardized ipecac that it is a powerfully destructive agent to amebæ, but the physician should exercise care that weak preparations are not provided, as he found that many of the fluid extracts on the market were too feeble to be efficacious. This difficulty can be, to some extent, obviated by the use of powdered ipecac, which, after all, is the most common method of using this drug.

Vedder also attempted to determine the question as to what ingredient of ipecac produced the valuable effects, and found that emetine is the active agent, since it destroyed amebæ in dilutions

of 1:100,000. Further, he believes that the therapeutic value of ipecac in amebic dysentery is in direct ratio to the amount of emetine which it contains. He points out that the Brazilian root usually has a larger content of emetine than other ipecacs. Vedder does not think that the resins, gums or ipecacuanhic acid are active factors in producing the results.

Concerning the influence of quinin and silver nitrate, he found that quinin destroyed the amebæ in the strength of 1:200,000, but that the silver nitrate was by long odds the most powerful of any drug, since it killed amebæ in dilutions of 1:300,000. At first sight this would seem to point to silver nitrate as being a better remedy than ipecac in dysentery, but this theoretical conclusion is vitiated by the fact that a very large part of the silver nitrate in solution is destroyed by coming in contact with albuminous matters and salt in the feces and tissues, thereby leaving a very small amount of the nitrate of silver to attack the amebæ; whereas a large bolus of ipecac, given by the mouth, goes into solution slowly, comparatively little of it is absorbed, and it is distributed throughout the entire intestinal tract without being decomposed. Vedder believes also that it is possible that the emetin which is absorbed does good after it has entered the blood stream, in that it attacks the amebæ which are too deeply buried in the tissues to permit the ipecac to act upon them directly when it is passing through the bowel, and this, perhaps, is the explanation of the good results obtained by Rogers in the treatment of the hepatitis and early liver abscess caused by this organism. It would seem probable, too, that in that form of dysentery which is due to the *Balantidium coli* ipecac may also act in a similar manner. It certainly does good clinically, and this organism is destroyed by ipecac in the dilution of 1:50,000 and by emetin in the dilution of 1:100,000.

Finally, Vedder asserts that the ipecac treatment of dysentery caused by protozoa should not on light grounds be set aside in favor of any other plan, but that in using this treatment great care should be taken to make sure that the dysentery is truly caused by protozoa, and is not bacillary, and also that only that ipecac be employed which proper analysis proves to contain the normal amount of emetin, a condition which can usually be obtained by insisting upon the prescribing of the ipecac root which comes from Brazil.

An investigation such as that of Dr. Vedder is of very great value, and we trust that others may be made which will throw further light upon this interesting and important subject.—*The Therapeutic Gazette*.
J. A. S.

CLINICAL EXPERIENCES WITH ASCITIC FLUID.—In order to demonstrate any possible usefulness of ascitic fluid as a food when given by the hypodermic route, a series of 9 children (8 suffering from the most extreme grade of acute gastro-enteritis or enterocolitis, and one from broncho-pneumonia and enteritis) were treated by this method. It was thought best to use it only in cases that had been treated unsuccessfully by the usual methods, and which consequently were in the terminal stages of the disease, in order that the test should be most severe, so too that any improvement might perhaps be fairly and justly attributed to the treatment under trial.

Unfortunately, the series of cases is too small from which to draw definite or broad conclusions, and the results must as yet be taken only as a possible indication of what may be accomplished with more experience, recognizing at the same time that this same broader experience may fail to show consistent results.

The treatment was begun too late in the season to gather more data at present, so that the results are presented merely for what they are worth.

As in all new methods of treatment one must be morally certain that no harm shall result, so here, although presumably at least 0.15 gram of nitrogen per kilo of body weight must be supplied to attain anything like a nitrogen equilibrium, and it had already been proved that several times this amount could be supplied to a normal dog, it was felt that it was safer, in dealing with a desperately sick child, that only a fraction of the necessary amount should be given, until it could be proved harmless under more rigid conditions.

The plan adopted was to give one injection and to watch the results, stopping at that point if definite improvement was shown. Where the improvement was not so marked, repeated doses were given daily in increasing amounts. The nitrogen contents of the fluids used varied from 0.34 to 0.4 per cent nitrogen.

Of the 9 cases treated, 2 recovered absolutely, and 1 showed

almost immediate improvement, which lasted for a week, at the end of which time the child died (Case II), although the improvement had been continuous up to the day of death and the patient actually gaining in weight. No discoverable cause of death was found post mortem, although the autopsy was not done by an expert pathologist. In all 3 cases the action of the ascitic fluid was apparently perfectly definite, and showed itself within a few hours of the time of injection. Even allowing that only 2 cases were helped, a percentage of 22 per cent possibly cured in the face of such desperate conditions as existed in all these cases makes it at least worth further investigation.

Two cases (I and II) were given only one injection each of 30 cc. of serum, 0.34 per cent nitrogen; one case (No. IV.) was given repeated doses for eight days.

The question of whether this method of treatment will find its greatest usefulness in giving one or possibly four or five injections, or in giving it over considerable periods, possibly for a week, can only be settled by further experience.

The apparent usefulness of both methods was exemplified in the 3 cases that recovered. The 7 cases that died all received several injections, but to no purpose, as they showed no improvement.

Also the question as to whether it does more good as a food or simply by supplying added normal constituents to the blood stream must be still sub judice.—*Am. Jour. Med. Sci.* J. A. S.

HOURL-GLASS STOMACH WITH AND WITHOUT GASTRIC ULCER.—Strauss and Brandenstein report three interesting cases to show the important information in regard to hour-glass stomach and other forms of spastic contraction in the digestive tract to be learned from examination with the Roentgen Rays. In the first case a penetrating ulcer had entailed a slight perigastritis which had resulted in adhesions, drawing up the stomach and forming a loose fold projecting into the interior and producing the effect of an hour-glass stomach, although not actually obstructing the passage. The condition was suspected before the operation on account of the short distance to the right of the median line. They urge others to investigate this question as to the displacement to the left of a stomach with motor insufficiency in connection with symptoms of an ulcer as a sign of deforming perigastritis. In

the second case the penetrating ulcer was found associated with a carcinoma opposite the protruding fold in the stomach. This case teaches that the Hadek symptom complex, which was marked in this case, does not exclude cancer. In the third case the constriction in the stomach wall was occupied by a roll of muscle, the size of a pencil, which passed to the entire length of the groove, encircling the stomach, and there were no traces of carcinoma, ulcer or erosion; the trouble seemed to be merely a localized hypertrophy of the muscle tissue. There was no motor disturbance in this case, but the gastric secretion was deficient. The patient was a woman of 48, who had had gastric disturbances two years before and for nearly a year there had been spasms of pain in the stomach region, especially after eating, but sometimes fasting, with vomiting after meals and gradual loss of nearly 90 pounds in weight. The constricting cord of muscle could be palpated and it was resected with a strip of stomach wall. These cases suggest further that discovery of the hour-glass stomach is just the beginning of the diagnosis.—*Berliner Klinisch. Wochenschrift*. J. A. S.

HEMOLYTIC SKIN REACTION IN CARCINOMA.—This paper is an analysis of the results obtained from a series of 100 patients on whom skin reaction test used by Elsberg for the diagnosis of carcinoma was done. The technic used by Elsberg was followed in every detail in order that the results might be thoroughly reliable. It consists, in general, in injecting five minims of a 20 per cent solution of washed normal red corpuscles into the subcutaneous tissue of the forearm of the patient. Within from 2 to 12 hours a definite reaction takes place, which is evidenced by the appearance of the slightly raised, slightly tender area about 2x3 cm. in area, which takes on a slightly brownish tinge, which may change to a maroon or a dirty greenish-yellow. This lasts 8 to 24 hours and then gradually fades. The cases tested were divided as follows: Of 27 cases of (1) cancer in various stages; (2) patients in whom cancer had just been removed; and, (3), cases in which the diagnosis was not determined pathologically; a positive reaction was obtained in 9 cases, a negative reaction in 16 cases, doubtful in 2 cases. Of 73 non-malignant cases the reaction was positive in 15 cases, negative in 55 cases and doubtful in 3 cases. Risley be-

lieves that the test is only suggestive and is rendered practically valueless as a diagnostic aid because of the fact that there are undoubtedly present in the blood of many patients other lysins of unknown nature which bring about hemolysis of varying degrees. This test, therefore, as the test done in *vitro*, fails to be of any practical value in the diagnosis of malignancy. It is highly significant, but will require further investigation or a more refined technic before becoming of value.—*Boston M. & S. Jour.* J. A. S.

STOMACH DILATION.—Six new cases are cited by Box and Wallace to support in the main their contention that the pressure exerted on the duodenum by the dilated stomach is an important factor in the production of obstructive symptoms. Beyond reiteration of the importance of combining lavage with the prone position, nothing new is offered as regards treatment.—*Lancet* (London). J. A. S.

INTESTINAL FLORA.—Reissmann states emphatically that the lactic acid treatment of intestinal putrefaction is not a panacea for all ills, but its value in cases of excessive intestinal putrefaction has been proved. Neither is its efficacy to be called in question, because a large number of so-called preparations of the lactic acid bacillus are marketed which on examination have been found not to contain the living bacillus. Also we should not attribute to the action of the lactic acid germ results which may have been produced by special dieting.—*Australian Medical Gazette.* J. A. S.

Department of Ear, Nose and Throat.

In Charge of DRs. A. W. DEROALDES and CLYDE LYNCH, New Orleans.

A SPECIAL FORM OF MASTOID INFECTION IN CHRONIC SUPPURATIVE OTITIS OF INFANTS (BLACK MASTOIDITIS).—Dr. A. Brindle of Bordeaux (*Rev. Heb. Laryng, D'Otol et de Rhin.*, No. 39, Sept. 30, 1911) reviews the macroscopical findings in the various forms of mastoiditis, viz.: 1.—Purulent mastoiditis, that form in which the pus is held under pressure and welling out with the removal of the outer table—the mastoid cavity acting as a reservoir. 2.—Cases in which there is not much pus, only a drop or

two, but the whole cellular structure filled with a plastic exudate (Fungous mastoiditis). 3.—Osteomyelitic mastoiditis, which follows a rapid infection with no pus formation, but intense congestion, bleeding freely under the curette and extending rapidly into the surrounding structures, giving rise very frequently to the complications of either meningitis, sinusitis, etc. It is the type so frequently seen during grippe infections. 4.—In other cases the cells appear as free from blood and pus as the cadaver specimens. The condition is not circumscribed, has very feeble resistance, becomes rapidly infected secondarily and repairs unusually slow; it is common in the diabetics. I have seen four instances of this variety, however, none of which were diabetic. This is truly the cadaveric mastoiditis. 5.—Then there is the cholesteatomatous variety, which is essentially a chronic process, where the middle ear, attic and mastoid cells are the seat of epithelial deposits, due to the ingrowth of epithelial tissue from the ear canal through a perforation in the membrana tympani into the regions of the mastoid and middle ear. 6.—Dr. Brindle then describes his black mastoiditis; it is rare, occurring only 16 times in 1200 operations.

The condition is not circumscribed, it being difficult to differentiate the healthy from the diseased bone. The cavity bleeds very little, resembling in this respect the cadaveric variety. The bone sections are very black, as though dipped in black ink, hence its name, while the cellular structure of the mastoid is not disintegrated, as in the fungoid variety; the process extends beyond the limits of the cellular structure, for in 15 of the 16 cases was it necessary to expose in the dura and sinus. Occurring most usually in children who have had a chronic suppuration, one encounters it mostly in performing the radical operation. It is not a true necrosis or gangrenous type, for there is no odor. It is distinguished only by the black discoloration of the bone and the peculiar oily liquid that issues therefrom; cultures from this fluid as well as particles of bone gave no result. Fifteen of the sixteen cases occurred in children; the sixteenth in a patient of 50. One was an acute infection, the other were acute exacerbations of chronic suppurative processes; one showed a post auricular fistula, another had been previously operated on for radical cure. In the cases that have been observed for more than six years, there ap-

peared in the healed cavity a dark vesicle filled with the characteristic fluid; the vesicle resembling the sinus wall, or not unlike the lesion of pemphigus, though no similar lesion appeared over the rest of the body.

No attempt has been made to describe the pathology, the condition being reported as one of the new classical states, and awaits the development of its true pathology.

Many cases of this character have probably been observed—I have seen two in my experience, one a child, the other an adult. Both recovered in the usual way, after radical operation, and there seemed to be no special difference except—as the author states—that peculiar discoloration of the bone.

Miscellany.

A PRELIMINARY NOTE ON THE NUTRITIVE VALUE OF WHITE AND OF STANDARD BREAD,—This subject, which has attracted attention in this country, is discussed by Hill and Flack in the *British Medical Journal* of May 6, 1911.

Considering the public interest in this matter, and the paucity of exact experimental evidence, Mr. Martin Flack and the author have carried out a research on rats. They chose rats because they are carnivorous animals and like man in this respect. They obtained as many young tame rats as they could and fed them for three weeks, some on white and some on standard bread, and for a second three weeks on white or standard flour. Both the bread and flour were obtained in a country town, from shops that supplied most of the inhabitants. The flours used for the bread were not the same as the flours obtained from the corn merchant. The rats were divided into two lots of twenty-five each and were kept under exactly the same conditions. The total weights of each lot were almost exactly the same at the start.

The rats were given bread or flour and water and no other food. At the end of three weeks they changed from bread to flour to see if the baking had anything to do with the result they were obtaining, but found this made no difference.

The result was astonishing. From first to last the rats fed on white bread or flour did far the worse. Ten of them died, and

five of these were eaten by the others before their bodies could be removed. Five of those fed on standard bread or flour died, and two were eaten. The weather was very cold at first, and this partly explains the heavy mortality. The white lot stood the cold worse.

Tables show the great difference in the putting on of weight in 15 rats of each lot. The standard increased $27\frac{1}{2}$ per cent. against 12 per cent. for the white flour rats in the last three weeks. At the end of the period the white 15 were nearly all losing weight. The white-fed rats were far less lively and less sleek in appearance.

It seems that either the standard flours contained something essential to growth which was not in the white flours, or that the white flours contained something detrimental—for example, improvers.

They tried another lot in white flour, plus an amount of wheat germ about equal to that in standard flour, and found the results every bit as good as for standard flour. It is highly probable that the germ, the growing part of the wheat grain, would contain amino-acid groupings essential for growth, and possible bodies which activate the enzymes engaged in the digestion of the proteins of wheat. Treatment of the white flour may have destroyed these bodies.

Testing the pancreatic digestion of their standard and white flours they found the standard in every case gives them earlier the Adamkiewicz reaction for tryptophane, showing that this essential amino acid is split off earlier, and, therefore, probably better absorbed in the intestines and utilized in the body.

Finally, they tested on 15 individuals the acidity of a weighted quantity of standard and white bread chewed in the mouth for two minutes. They found no difference in this respect. It has been stated that the acidity of white flour is greater and leads to decay of the teeth. They assert they cannot confirm this, at any rate, for the breads tested by them.

They are now doing controls on further groups of rats, three groups of 25 each—(1) whole meal, (2) standard, (3) white flour. The first week's weighings show white flour markedly inferior and whole meal the best. The results given appear so striking that they feel justified in publishing this preliminary note.

It seems that children of the poor, who are largely fed on bread and margarine, or bread and jam, ought to have the standard and not the white bread tested by Flack and Hill. How far the results are due to treatment of their white flours by "bleaching," etc., they are not able to say, and cannot, therefore, generalize that all white flours are worse than standard.—J. A. S.

ADMINISTRATION OF SULPHONAL AND ITS DANGERS.—Robertson (*Journal of Medical Science*, April, 1911) expresses a belief that sulphonal is a dangerous drug. He asserts that there is no other sedative in use, the employment of which, in ordinary medicinal doses, must be accompanied by so many precautions, and which is so beset by various dangers, as sulphonal. Except in skilled and careful hands it must, therefore, be regarded as a dangerous drug, and it should not be prescribed unless the patient is to be under medical observation during its administration. Even in medical hands death has resulted from its use in a large number of cases, and the writer states he has obtained a note of at least 25 cases, few, however, being of recent occurrence, from those who have replied to his inquiries. It is, moreover, absolutely certain that the true death roll is very much greater, as both the acute form of poisoning by sudden collapse, and the more chronic form with hematorporphyrinuria may be mistaken for other conditions if sulphonal be not suspected. In the first case of chronic poisoning which he had an opportunity of observing, one of the earliest in this country, the symptoms were so vague that an eminent consulting physician was called in to diagnose the condition; but the correct diagnosis was not made till some weeks after death, when a report was made by MacMunn of the pigment fund in a specimen of urine sent to him for examination. The author asserts he has also known of two cases of sudden collapse and of semi-consciousness, the result of acute poisoning, in neither of which sulphonal was suspected of being the cause, because the symptoms developed with such rapidity, and the diagnosis of the condition ultimately lay between a cardiac or a cerebral disorder till its true nature was discovered.

Uncertainty in its effects, or the existence of persons who are specially susceptible to it, are also serious objections to the usefulness of any drug. It is not comforting to know that a drug may be safely administered to ninety-nine persons out of one hundred

if it acts dangerously on the hundredth, and no means exists for discovering who this individual may be. On the ground of this uncertainty the employment of sulphonal has been condemned by at least one authority on therapeutics. In contrast with these dangerous symptoms, and even deaths from ordinary doses, it is known that very large single doses have often been taken by mistake or otherwise and been recovered from. Patients have also been known to take sulphonal in full doses (90 grains per day) continuously for a period of many weeks without serious results, and others have taken it regularly for many years without unpleasant symptoms, or even any disturbance to the general health or nutrition of the body. The writer has been informed of a lady, aged seventy-seven, who has all her life been a sufferer from insomnia, who has for the last twenty years taken sulphonal regularly every night. During most of this time the dose was from 20 to 40 grains; during part it was higher, but for several years it has been reduced to 15 grains. It is taken in hot milk. Except for a difficulty in walking the patient is remarkably well and enjoys good health, and does not appear to have suffered in any way from the prolonged use of the drug.

In conclusion, there now appears to be a sufficient volume of evidence from physicians competent to judge, who, from their habit of using the drug daily in their practices, have had ample opportunities of watching its effects, which indicates that by eliminating certain cases, by exercising the precautions which have been mentioned, and by watching its effects closely, sulphonal may be continuously administered with comparative safety. Its discontinuous or occasional use in single doses of moderate size, if idiosyncrasy has been excluded, does not appear to be accompanied by any danger.—J. A. S.

STUDIES IN THE METABOLISM OF CERTAIN SKIN DISEASES.—Johnston and Schwartz (*New York Med. Jour.*, March 13, 20, 27, 1910) in a series of elaborate studies undertaken for the purpose of demonstrating, if possible, by examination of the urine, some relation between disordered metabolism and certain inflammatory disease of the skin, and for the purpose of discovering some means of preventing relapses in these diseases, concluded that none of the urinary compounds dealt with in these studies are likely to have any specific casual relation to the diseases considered. Since indicanuria, for example, occurs independently of lesions upon the

skin and in all the forms of inflammation considered, this condition is not likely to have any direct casual relation to diseases of the skin. In view of the fact that disturbance in the nitrogen partition is most common in the prodromal period, and that it is associated with other symptoms indicative of intoxication, and that the figures return to the normal coincidently with improvement, the authors regard the conclusion justifiable that this change and the lesions upon the skin are the effects of a common cause which at the present time is not discoverable. These studies suggested nothing especially new in the way of treatment. Regulation of diet is regarded as of the first importance, especially as to the taking of proteids, which should be limited, or, in acute cases, even totally prohibited. Green fruit and vegetables are especially indicated. Medicinal treatment should consist of elimination by the bowels, kidney and skin. Saline cathartics with occasional doses of mercurials are better than antiseptics in intestinal putrefaction. Elimination by the kidney may be secured by the administration of large quantities of water alone, or saline diuretics may be used. The administration of thyroid or nucleoproteids of the thyroid, was found useful in prurigo and certain cases of dermatitis herpetiformis.—J. A. S.

PLANTS IN THE SICK ROOM.—R. H. M. Dawbarn, in his series of "Short Talks With My Students" (*Medical Record*), explains the un wisdom of keeping flowers or plants in a sick room at night. Flowers possess three prominent functions in so far as they affect the air about them. First, there is transpiration; they give up moisture taken from the soil, wherefore the air becomes humid if many (especially growing) plants are kept in the room. Second, there is respiration; plants here act much as do human beings, using up oxygen and throwing off carbonic acid. Third, there is photosynthesis, the name given to the action of sunlight upon the stems, leaves and all green plants chiefly; it is the reverse of the result of respiratory activity, as just stated. So long as there is daylight carbon dioxide is taken in and oxygen given off by photosynthesis. Consequently, until nightfall, functions two and three about balance one another, leaving neither good nor bad results. But during the entire night functions one and two continue their activity, whilst function three is suspended. Function one is not objectionable; but two, without three to balance it, acts (in prin-

ciple but not in amount) until the return of daylight, just like an additional person breathing in the room, thus leaving a little less oxygen for the use of the invalid. The standing order should, therefore, be to remove all plants or flowers at night; it is based upon the sound facts of plant psychology.—J. A. S.

THE INFLUENCE OF THE COLD BATH UPON THE GLYCOGEN OF HUMAN BEINGS.—On previous occasions we have called attention to the life-saving influence of the cold bath in many of the acute infection fevers, notably typhoid, and have pointed out that such baths not only increase the elimination of poisons, but also re-establish circulatory equilibrium and prevent complications. It is quite probable that they also influence various protective processes in the body, although as yet little if any experimental evidence has been adduced in support of this view. One of the reasons for supposing that cold baths increase the protective processes is that the benefit which accrues is so great that it is inconceivable that the mere equalization of the circulation, the reduction of temperature, and the elimination of poisons can be solely responsible. As a matter of fact, we know far too little, except empirically, of the influence of cold baths upon the body, and for that reason careful original investigation along these lines possesses peculiar interest.

Lusk (*American Journal of Physiology*, March 1, 1911) reports the results of his investigation as to the influence of cold bathing upon the glycogen contents of the body of man. He finds that when normal men are immersed in water which is exceedingly cold, severe shivering at once comes on, and that there is a rapid utilization of body glycogen, as indicated by a fall in the respiratory quotient to the fasting level. He also found that the cold bath very greatly increased heat production, which is a point of considerable interest in that, in the past, many physicians have supposed that the cold bath was advantageous in that it exercised an antipyretic effect; but for many years those who have regarded moderate fever as a protective process designed by the body to combat the infection have also recognized that the production of heat as the result of the cold bath was considerably increased, and that, although the peripheral portions of the body may be cooled by this means, there is no actual decrease, but rather an increase, in the total body

temperature. This perhaps is an explanation of part of the good accomplished by hydrotherpay.

The chief criticism which can be urged against Lusk's experiments is that the water which he employed was excessively cold—namely, as low as 10 centigrade; but in all three of his subjects, while the danger of such cold bathing was considered, no ill effects were induced save that after the bath there was considerable muscular lassitude. It is evident, too, that in all of his patients the circulatory condition was good, since the skin became intensely red, and they promptly reacted to the bath. He found, too, that the blood pressure rose considerably, but that it was difficult to estimate it because the severe shivering interfered with accurate tests with the sphygmomanometer.—*The Therapeutic Gazette.* J. A. S.

Louisiana State Medical Society Notes.

In Charge of DR. JOSEPH D. MARTIN, Secretary, New Orleans.

ANNOUNCEMENT.

DR. R. O. SIMMONS, President of the Louisiana State Medical Society, has appointed the following committees for 1912:

Committee on Publication.—Dr. Joseph D. Martin, ex-officio, Chairman; Drs. L. R. De Buys and H. W. Kostmayer, New Orleans.

Committee on Public Policy and Legislation.—Dr. Fred J. Mayer, Scott, La., Chairman; Dr. R. F. Harrell, Alexandria; Drs. M. Feingold, Allan Eustis and J. D. Martin, New Orleans.

Auxiliary Committee on Legislation.—Drs. E. J. Graner, E. Denegre Martin, Homer Dupuy, Paul L. Reiss, H. Dickson Bruns, R. W. Salter, George S. Bel, R. C. Lynch, New Orleans; J. L. Scales, R. M. Penick, J. A. Blanchard, G. W. Robinson, Shreveport; Charles McVea, Baton Rouge; D. D. Mims, Crowley; E. K. Sims, Donaldsonville; T. B. Pugh, Napoleonville; E. S. Matthews, Bunkie; J. S. Colvin, Gibsland; C. M. Tucker, Haughton; J. H. Cooper, Welsh; J. A. Biggs, Grayson, S. J. Smart, Logansport; W. E. Long, Lake Providence; W. F. Hagaman, Norwood; C. L. Ramage, Winsboro; E. B. Gray, Colfax; G. P. Minvielle,

Jeannerette; W. G. Owen, White Castle; J. A. Gaar, Jonesboro; W. H. Weaver, McDonoghville; J. F. Mouton, Lafayette; J. J. Ayo, Bowie; W. F. Wade, Good Pine; W. S. Harrell, Ruston; Montgomery Williams, Walker; G. W. Gaines, Tallulah; O. M. Patterson, Bastrop; J. S. Stevens, Natchitoches; F. C. Bennette, Monroe; H. L. Ballowe, Buras; Nash Collins, Delhi; J. S. Branch, Elizabeth; C. E. Edgerton, Coushatta; E. J. Cather, Loring; Geo. H. Jones, Lutcher; J. W. McGehee, Garyville; N. Catalano, Newellton; H. G. Morris, Independence; G. M. Snelling, Monroe; D. O. Willis, Leesville; R. S. Winn, Wilhelm; D. W. Kelly, Winnfield.

Committee on Scientific Work.—Dr. Joseph D. Martin, ex-officio, Chairman; Drs. C. W. Duval and C. H. Cammack, New Orleans.

DUES FOR 1912.—The attention of members of the Louisiana State Medical Society is called to the fact that, under the provisions of the revised Charter and By-Laws of the society, the fiscal year begins January 1 of each year. Members residing in unorganized parishes are requested to send their dues at once to the Treasurer, Dr. C. C. Bass, 141 Elk Place, New Orleans; those residing in organized parishes should remit to the local secretaries.

COMMITTEE ON ARRANGEMENT.—Dr. Maurice Couret, of New Orleans, has been elected General Chairman of the Committee on Arrangement for the 1912 Meeting, April 23-25. The personnel of the committee will be announced in the next issue of the JOURNAL.

Medical News Items.

INTERNATIONAL CONGRESS AGAINST TUBERCULOSIS.—The postponed seventh Congress against Tuberculosis is to be held in Rome from April 14 to 20, 1912. The membership fee is \$5, or 25 francs—entitling the subscriber to all privileges and functions. All interested should send the subscription, with address and visiting card, to the Secretary General of the Tuberculosis Congress, Via in Lucina 36, Rome, Italy.

EDUCATIONAL AND HEALTH CONFERENCE IN CHICAGO.—An-
nouncement is made of a Conference on Medical Education, Legis-
lation and Public Health, to be held at the Congress Hotel in Chi-
cago on Monday and Tuesday, February 26 and 27, 1912. The
meetings are public, and especially to Boards of Health, licensing
boards and officials and teachers interested in the general subjects
involved. Especial addresses are announced to be delivered by
Mr. Frederick C. Hallett, Secretary of the Joint Examining
Board of England; by Senator Robert L. Owen and by Senator
Robert M. LaFollette. On the two days following the above con-
ference the Association of American Medical Colleges will meet
at the same place.

CELEBRATION.—The University Medical College of Kansas City,
Missouri, celebrated the first New Year under the present reorgan-
ized faculty with a dinner. Dean C. M. Jackson delivered the
address of the occasion.

THE AMERICAN JOURNAL OF SURGERY REPLIES.—In the January
issue of the *American Journal of Surgery* a caustic editorial re-
views the policy of the *Journal of the A. M. A.* in the matter of
advertising and incidentally in the "Holier-than-thou" attitude
which the A. M. A. organ has assumed with regard to other medi-
cal publications. The *American Journal of Surgery* has been evi-
dently especially subjected to the attacks of the national weekly,
and a full and fair review is submitted of the status of advertising
in both journals. Graphic illustration and explanatory texts are
displayed in the argument, and it will be interesting to see the
attitude of the *A. M. A. Journal*—if it should condescend to take
notice of what would seem to be a deserved call-down.

THE AMERICAN HOSPITAL ASSOCIATION.—The next meeting of
the American Hospital Association is announced for September
24-27, 1912, at Detroit, Michigan. The present officers include
Dr. Henry M. Hurd, Johns Hopkins Hospital, President; Dr. A. J.
Raney, Lakeside Hospital, Cleveland; Mr. J. H. Hudson, Harper
Hospital, Detroit, and Miss Nancy P. Ellicott, Rockefeller Hos-
pital, New York, Vice Presidents; with Mr. J. W. E. Brown, of
Toronto, as Secretary, and Mr. Asa Bacon, Chicago, as Treasurer.

PERSONAL.—Dr. Irving Hardesty, of Tulane Medical Depart-

ment, was elected a member of the Executive Committee of the American Association of Anatomists at the Princeton meeting. Christmas week Dr. Ross G. Harrison of Yale was elected President of the Association, with Dr. Thos. G. Lee of the University of Minnesota Vice President; Dr. G. K. Huber of the University of Michigan was continued as Secretary.

Dr. Oscar Dowling, President of the Louisiana State Board of Health, with Dr. P. E. Archinard, bacteriologist of the Board, visited Dallas in January to investigate the epidemic of meningitis in that city.

Dr. N. P. Colwell, Secretary of the Council on Medical Education of the A. M. A., was in New Orleans in January.

THE BRITISH PHARMACEUTICAL CODEX, a new work on the drugs and medicines in use in the British Empire, is said to list about 14,000 items.

THE PROBLEM OF EUGENICS.—Dr. Robert Jones, lecturer on mental diseases at St. Bartholomew's Hospital in London, has lately shown how general is the so-called neurotic temperament among persons of genius, and cites, for example, Shelley, Lamb, Wordsworth, Coleridge, Southey, Sheridan, Cowper, Pope, Byron, and even Scott, as having marked inherited weaknesses and neurotic or insane ancestors; and the same is true of musicians of great distinction. He thinks that while the occasional genius may give diversion, science must look to the all-round soundness and ability of the common man for the future's best.

DR. RUPERT BLUE TAKES OFFICE.—Dr. Rupert Blue was inaugurated Surgeon-General of the Public Health and Marine Hospital Service on January 13, succeeding the late Dr. Walter Wyman.

U. S. CIVIL SERVICE NOTICE: ANATOMIST WANTED.—The United States Civil Service Commission announces an examination on February 20, 1912, to secure eligibles from which to make certification to fill a vacancy in the position of anatomist (male), at \$1,600 per annum, in the Army Medical Museum, Office of the Surgeon General, and vacancies requiring similar qualifications as they may occur, unless it is found to be in the interest of the service to fill the vacancy by reinstatement, transfer, or promotion.

Applicants must have reached their twentieth but not their thirty-fifth birthday on the date of the examination.

Men only will be admitted to this examination.

It is desired that the person appointed to this position shall be young, in good health, a graduate in medicine, have a thorough knowledge of pathologic histology, pathology and bacteriology, be capable of making photomicrographs, understand microscopes, surgical instruments and appliances, and be able to prepare, card and keep in order museum specimens.

All statements relating to training, experience and fitness are subject to verification.

In accordance with a recent act of Congress an applicant for this examination will be required to be examined in the State or Territory in which he resides and to show in his application that he has been actually domiciled in such State or Territory for at least one year previous to the date of the examination.

This examination is open to all citizens of the United States who comply with the requirements.

Applicants should at once apply to the United States Civil Service Commission, Washington, D. C., for detailed information.

REMOVALS.—Dr. D. B. Beach, from Quanah, Texas, to Wellington; Dr. Joseph W. Gregory, from Altura, El Paso, Texas, to Cisco; Dr. A. J. Sands, from Capron, Okla., to Alva; Dr. J. K. Griffith, from Jackson, La., to Slidell; Dr. T. F. Long, from Shreveport, La., to Shuqualak, Miss.

MARRIED.—Dr. Lewis Wine Bremmerman and Mrs. Margaret Thomas Alexander, at Chicago, January 11, 1912.

DIED.—On December 22, 1911, Dr. Rhett Goode, of Mobile, Ala. Dr. Goode was Dean of the Medical School of the University of Alabama, and for many years prominent in Alabama health affairs.

January 24, 1912, Dr. Oscar Czarnowski, of New Orleans, aged seventy-five. He was not only one of the oldest, but one of the best and most favorably known among the general practitioners of this city. Highly esteemed by his confreres and beloved by his patients, he will be generally and sincerely missed.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of respective publications. The acceptance of a book implies no obligation to review.

Scientific Features of Modern Medicine, by FREDERIC S. LEE, Ph. D. The Columbia University Press, New York, 1911.

The subject was treated in a set of lectures—the Jesup lectures of Columbia University—and were delivered in February and March, 1911. Their purpose was to present striking illustrations of the scientific character of modern medicine, in clear language, not too technical for the layman.

In book form the subject is divided in eight chapters: First, a sketch of the normal human body; second, the nature and the diagnosis of disease; third, methods of treating disease; fourth, bacteria and protozoa; fifth, treatment and prevention of infectious diseases; sixth, the problem of cancer, etc.; seventh, features of modern surgery; eighth, the rôle of experiment in medicine. Surely, the lecturer and writer has given himself enough scope, yet he touches upon the different phases of the subject intelligently and interestingly, as well as sufficiently to enlighten the layman and improve the physician.

A sentence quoted from an early chapter strikes the keynote of the book: "It would be fatuous to disparage the inheritance with which medicine entered upon its present stage, but one would be blind not to recognize its truly wonderful growth under the influence of the scientific spirit of our generation."

C. C.

Diseases of the Stomach, by CHARLES D. AARON, Sc. D., M. D. Lea & Febiger, Philadelphia and New York, 1911.

Not only is the time gone by when it was necessary to vindicate the procedures which allow us to understand more exactly the perversion of the stomach's functions, but, since 1869, when Kussmaul advocated the washing out of the stomach in the treatment of gastric ectasis, the science and practice of gastro-enterology have been so firmly established that they are now recognized everywhere.

Anyone, were it but once, who witnessed the evolution in a few years of a gastric affection, apparently mild at first, resulting in an ulcer, with cicatricial stenosis of the pylorus, because hyperchlorhydria, at the beginning, a functional perversion entirely curable, was not recognized, will never doubt again the usefulness of the procedures now employed.

Still more to-day the methods of gastric investigation are clearly brought within the conception and reach of the practitioner, and the Aaron book now before us is one of those mainly from American source which contributed to that beneficial end.

A few years ago nothing appeared more confused and difficult than the treatment of gastric diseases. They seemed to be a sort of inextricable chaos, where only the specialist could dimly see his way out through a narrow path of complicated chemistry and cabalistic formulas. To-day much of the brush has been cleared, and, in fact, for practical purposes, things are actually more simple than they look. Much, too much, importance has been attached to changes of gastric chemism, only at the expense of the muscular and nervous factors. Perversion of function,

in its three large divisions—hypo, hyper-function and abnormal fermentation—should lead the practitioner in his quest. The abstract principle, a mooted one, as to whether or not the perverted function is the cause or result of anatomic changes is practically secondary. The immediate need is to correct the perversion and help the patient.

The author's work is to be commended for his "endeavor to cover the medical aspects of gastric disorders in such a manner as to answer the actual needs of the practitioner. * * * It is intentionally practical and therapeutic."

STORCK.

Food and the Principles of Dietetics, by ROBERT HUTCHINSON, M. D. (Edin.), F. R. C. P. William Wood & Co., New York.

Passing through three editions since 1900, this book has become well known. Its lucidity has made it popular with the profession. This characteristic, together with its conciseness and accuracy of text, gives it a deservedly high place among books of its kind. The various dietetic cures and systems are briefly but logically considered.

Dr. Hutchinson's book is worthy of a distinct place among the few best books which have come to us in recent years.

STORCK.

Modern Treatment: The Management of Disease with Medicinal and Non-Medicinal Remedies, edited by HOBART AMORY HARE, M. D., assisted by H. R. M. LANDIS, M. D. Lea & Febiger, Philadelphia and New York.

The scope of this work is so broad that in the compass of a review it is impossible to do adequate justice to a work of such magnitude.

The plan of having each author write his own contribution separately, and apparently independently, appeals to the reviewer. While the authors may lack unanimity in regard to certain matters, they give us their independent views and experiences as most of us want them.

In Volume I the contributors are Drs. Aristides Agramonte, Oswald T. Avery, W. Jarvis Barlow, Simon Baruch, S. P. Beebe, Thomas A. Clayton, F. X. Dercum, Charles Hunter Dunn, Julius Friedenwald, Guy Hinsdale, S. Dana Hubbard, Ambrose Hunsberger, Thomas Wright Jackson, J. W. Kerr, H. R. M. Landis, Frank Sherman Meara, W. H. Park, George E. Pfahler, F. M. Pottinger, Nathaniel Bowdich Potter, George E. Price, David Riesman, Leonard Rogers, B. F. Royer, Robert Dawson Rudolf, John Ruhrah, Arthur M. Shrady, Thomas A. Story and Horatio C. Wood, Jr.

In the second volume we also find a concourse of distinguished authorities—namely, Brooke M. Anspach, S. P. Beebe, Charles F. Craig, John C. Dacosta, F. X. Dercum, George Fetterolf, Howard Fox, William S. Gottheil, H. F. Harris, Elliot P. Joslin, James Hendrie Lloyd, D. J. McCarthy, James Mackenzie, Herbert C. Moffitt, Arthur Newlin, Major T. L. Rhoads, Joseph Sailer, William P. Shanahan, S. MacCuen Smith, James Thorington and James Tyson.

Special attention should be called to the articles on Diabetes Mellitus and Diabetes Insipidus, by Elliot J. Joslin; also to Diseases of the Circulatory System, by Dr. MacKenzie; Dysentery, by Dr. Rhoads, and Malarial Infection, by Dr. Craig.

It would have been well if Dr. Pottinger had been more specific in regard to what he considers the proper interpretation of von Pirquet's tuberculin test.

The article on Pellagra is well illustrated with colored plates.

An excellent and exhaustive description of the various forms in which remedies may be administered is embraced in the chapter on the Combination of Drugs by Ambrose Hunsberger.

There are some errors in grammatical endings, also a disregard, at times, of the pharmaceutical spelling.

The volumes have much merit, and are a distinct contribution to our American medical literature.

STORCK.

Dyspepsia: Its Varieties and Treatment, by W. SALTAN FENWICK, M. D. W. B. Saunders Company, Philadelphia and London.

While the title of the book, "Dyspepsia," is, as one reviewer remarks, rather indefinite, in an age of scientific precision, we might ask, in the words of the immortal bard, "What's in a name?"

The book has merit, the chief being in the fact that it was written by W. Salton Fenwick out of the full experience of clinical contact with many cases of digestive diseases. It has about it the sincerity of the true clinician, and is not loaded with suggestions for the use of a lot of impractical apparatus.

Certain minor subjects are given more space than we think they deserve. Morbid States of the Stomach in Phthisis are given the consideration they deserve.

The practicing physician will find the book replete with information.

STORCK.

Vaginal Celiotomy, by S. WYLLIS BANDLER, M. D. W. B. Saunders Company, Philadelphia and London, 1911.

This is a book of 450 pages, in which Dr. Bandler discusses in detail the technic, indications and scope of the vaginal route in pelvic surgery. Dr. Bandler states in the preface that he has never given vaginal celiotomy the extreme praise voiced by its enthusiastic admirers, but has often wondered at its most complete neglect by a large share of the surgeons and gynecologists.

As he knew of no book treating the subject in detail, together with allied subjects, he offers this work as the result of an experience dating from 1895. He has had associated with him in the preparation of the text K. K. Bosse, an artist, who has executed 148 splendid illustrations, that add materially to the value of the work.

The contents are grouped as follows: Vaginal celiotomy, anterior vaginal celiotomy, simple vaginal hysterectomy, indications and limitations in disease of the adnexa, hysterectomy for myomata, submucous, deep interstitial tumors and intraligamentous growths; hysterectomy and technic, with indications for vaginal Cesarean section.

Authors are often guilty of being too dogmatic in urging the claims of a procedure or theory. The reader will note the absence of any such tendency in Dr. Bandler's book.

In a concise manner he has discussed this broad subject in a way that displays a wide experience, and, to those desiring a well-illustrated book on this subject, the book is recommended.

MILLER.

Publications Received.

LEA & FEBIGER, Philadelphia and London, 1911.

Progressive Medicine, Vol XIII, No. 4. Edited by Hobart Amory Hare, M. D., assisted by Leighton F. Appleman, M. D.

W. M. LEONARD, Boston, 1911.

Case Histories in Medicine, by Richard C. Cabot, M. D. Second edition, revised and enlarged.

J. B. LIPPINCOTT COMPANY, Philadelphia and London, 1911.

International Clinics, Vol. IV, twenty-first series, 1911. Edited by the leading members of the medical profession throughout the world.

P. BLAKISTON'S SON & CO., Philadelphia, 1911.

Further Researches Into Induced Cell-Reproduction and Cancer. (The McFadden Researches.)

The Text-Book of Medical Jurisprudence and Toxicology, by John J. Reese, M. D. Eighth edition, revised by D. J. McCarthy, A. B., M. D.

Manual of Operative Surgery, by John Fairbairn Binnie, A. M., C. M. Fifth edition, revised and enlarged.

MISCELLANEOUS.

Scientific Features of Modern Medicine, by Frederic S. Lee, Ph. D. (The Columbia University Press, New York, 1911.)

E. Merck's Annual Report. Vol. XXIV. (E. Merck Chemical Works, Damstadt, 1911.)

Swamp Fever in Horses, by L. Van Es, E. D. Harris and A. F. Schalk. (North Dakota Agricultural College, 1911.)

Bacterial Vaccines, Tuberculins and Serums. (Farke, Davis & Co., Detroit, 1911.)

Reprints.

Polypoid Growth and Rectal Polypi, With a Report of a Case of Fibroma Undergoing Myxomatous Degeneration; Syphilis of the Ano-Rectal Region; Rectal Diseases; A Report of Three Cases—Condyloma, Lipoma and Foreign Body; Operative Treatment of Internal Hemorrhoids, Including the After-Treatment as Well as the Sequelæ Which Occasionally Ensnue; Specialism, With Special Reference to Proctology; Some of the Methods to Be Pursued in the Diagnosis of Diseases of the Rectum and Anus, as Viewed from the Standpoint of Their Practical importance to the General Practitioner, by Lewis H. Adler, Jr., M. D.

Arteriosclerosis, Cardiosclerosis and Intestinal Putrefaction; Fibrillation of the Auricle; Adams-Stokes Disease, With Complete Heart Block, Showing a Conspicuous Lesion in the Path of the Auricle of the Auriculoventricular Bundle, by Louis Faugeres Bishop, A. M., M. D.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans
FOR DECEMBER, 1911.

CAUSE.	White.	Colored.	Total.
Typhoid Fever.....	3	3	6
Intermittent Fever (Malarial Cachexia)			
Smallpox.....			
Measles.....			
Scarlet Fever.....	1		1
Whooping Cough.....			
Diphtheria and Croup.....	2		2
Influenza.....	8	6	14
Cholera Nostras.....			
Pyemia and Septicemia		3	3
Tuberculosis.....	40	37	77
Cancer.....	21	2	23
Rheumatism and Gout	2	1	3
Diabetes.....	3	1	4
Alcoholism	1	1	2
Encephalitis and Meningitis.....	6	2	8
Locomotor Ataxia.....			
Congestion, Hemorrhage and Softening of Brain.....	28	8	36
Paralysis.....	3	1	4
Convulsions of Infants		1	1
Other Diseases of Infancy	18	4	22
Tetanus.....	1		1
Other Nervous Diseases	1	1	2
Heart Diseases.....	28	31	59
Bronchitis.....	3	3	6
Pneumonia and Broncho-Pneumonia.....	23	36	59
Other Respiratory Diseases.....	1		1
Ulcer of Stomach.....	1		1
Other Diseases of the Stomach	3	2	5
Diarrhea, Dysentery and Enteritis.....	26	14	40
Hernia, Intestinal Obstruction.....	3	2	5
Cirrhosis of Liver.....	13	5	18
Other Diseases of the Liver	2		2
Simple Peritonitis			
Appendicitis.....	1		1
Bright's Disease	40	29	69
Other Genito-Urinary Diseases.....	11	8	19
Puerperal Diseases	3	2	5
Senile Debility.....	5	6	11
Suicide.....	2		2
Injuries.....	17	25	42
All Other Causes.....	59	22	81
TOTAL.....	379	256	635

Still-Born Children—White, 34; colored, 26; total, 60.

Population of City (estimated)—White, 272,000; colored, 101,000;
total, 373,000.

Death Rate per 1000 per annum for Month—White, 16.72; colored,
30.41; total, 20.10.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 30.11
Mean temperature 58.00
Total precipitation 4.18 inches.
Prevailing direction of wind, east.

New Orleans Medical and Surgical Journal.

VOL. LXIV.

MARCH, 1912.

No. 9

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

Louisiana State Medical Society Proceedings.

EDITED BY PUBLICATION COMMITTEE,

DR. JOSEPH D. MARTIN, Chairman, 141 Elk Place, New Orleans, La.

DR. I. M. CALLOWAY, of Shreveport, La., read a paper entitled:

Extra-Uterine Abdominal Pregnancy—(Primary).

Abdominal pregnancy seems so improbable that many learned accoucheurs have thought it impossible that it could ever exist as an original accident. It was not thought possible that, even if the ovum were deposited in the peritoneum, it could ever survive and develop.

It is, therefore, an open question as to whether pregnancy is ever primarily abdominal. Most authorities believe not, owing to the fact that it would be difficult for so minute a body as the ovum to be able to fix itself on the smooth peritoneal surface; they, therefore, think that abdominal pregnancy is primarily either tubal or ovarian, the sac, in which the ovum was contained, giving way and the ovum retaining its vitality through partial attachment to the original sac.

The causes of abdominal pregnancy must also be hypothetical,

but it can easily be imagined that after the impregnation of the vesicle, the ovule may fall into the peritoneum in consequence of a sudden suspension of the erection of the Fallopian tubes, imperfect erection, some malformation, natural or acquired, of the fimbriated extremity, or the ovule, even after reaching the tube, may, by some reverse action, recede into the abdominal cavity. On the whole, it seems not unreasonable to admit the usual explanation that the ovule, already impregnated, escapes the grasp of the Fallopian tubes and falls into the abdominal cavity, where it roots itself and develops.

That the chorion villi do graft themselves to the surrounding peritoneum is certain, and has been observed in nearly all cases of abdominal pregnancy.

Impregnated ovules often drop into the peritoneal cavity; the majority of these perish, and, therefore, do no harm; when they do survive, however, the chorion villi attach themselves to the surrounding structures, and finally develop into a placenta.

The ovum in maintaining its vitality has not only its own envelopes, the amnion and chorion, but also adventitious coverings, varying according to the original location of the ovule.

In abdominal pregnancy these envelopes of the ovum arise from adhesion of the chorion to the abdominal peritoneum; the intestines and surrounding tissues become agglutinated to the sac, so as to form one irregular swelling, gradually increasing in size during the life of the fetus. In spite of these unnatural locations, the embryo is developed with almost the same rapidity as in normal pregnancy—even to the ninth month.

When the ovum comes in contact with the peritoneum a connective tissue proliferation is set up which surrounds it with a vascular sac. The latter often attains a degree of thickness which renders it comparable to a gravid uterus.

It is claimed that organic muscular fibers have been found in the sac, especially near the uterine attachment. In this form the fetus usually reaches maturity.

In rare cases the ovum develops free in the abdominal cavity without the formation of psuedomembranes, the fetus being surrounded only by the amnion and chorion, and is entirely free of adhesions.

Diagnosis is by no means easy, the most characteristic symptom being early metrorrhagia, combined with the usual signs of preg-

nancy; very severe and frequently repeated attacks of abdominal pains are nearly always present, and should at once arouse suspicion, especially if associated with hemorrhage and the discharge of a decidual membrane from the uterus.

On palpation you will find that the shape of the abdomen differs from that of normal pregnancy, being generally more developed in a transverse direction and the rounded outline of the gravid uterus cannot be detected.

When development has advanced nearly to term, the fetal limbs can be distinctly felt; by bimanual examination it may be possible to make out that the uterus is not enlarged and distinctly separate from the bulk of the tumor. The diagnosis, if the fetal limbs and heart sounds could be detected, would be cleared up by the use of the uterine sound, which would show that the uterus was empty.

In abdominal pregnancy there is usually a local peritonitis with pain and fever, followed by the production of pseudomembranes which shut off the ovum from the cavity. In exceptional cases, where the inflammatory conditions do not develop, the movements of the fetus in its own membranes may give rise to intense suffering. I think that the impregnated ovum gets its nourishment by osmosis, and I believe, as in this case, it adheres to the peritoneum. Adhesions are quickly founded on any peritoneal surface and the fetal circulation is immediately established.

The case which I have the honor to report to you appears to us as a primary abdominal pregnancy.

In some cases the fetus may disappear or become mummified and remain in the abdomen for years. Some authorities advise waiting until this condition exists, with hopes of saving the mother, as placental attachments are soon severed; all can then be removed with safety to mother.

We expected to do a morsupidization and remove placenta later, but found plan adopted by the exigencies of the case the most happy. Hemorrhage is a great danger on removal of placenta if attached to the floor of the pelvis. I present the only case that I have ever seen. In the literature I can find no cases that have gone to term. Of course, there is somewhere reported cases that are as plain as this one.

Ola Jones, age 26, farm hand, was entered in Shreveport Charity Hospital February 25, 1911. She was considered an ordinary case

of pregnancy. After one or two weeks she was attacked with nausea and pains in the abdomen; thinking it the beginning of labor, I examined her and found fetal head in left hypochondrial region, abdominal walls so thin that hands could be palpated and observed to move; fetal heart heard and movements were freely observed.

In the right iliac region a mass was palpated, which afterwards proved to be the enlarged uterus with placenta attached. Vaginal examination showed long patulous cervix in right pelvis and a mass of feet and knees in left pelvis.

She gave a history of hemorrhage from uterus lasting six weeks, about seven and a half months previous to this examination; then cessation to time of delivery. During this period she at times had a whitish membranous discharge. With these symptoms diagnosis of abdominal pregnancy was made.

In extra-uterine pregnancy menstruation may continue for two or three months before cessation. We think that in this instance such was the case, and at the time of the hemorrhage the woman was one and a half or two months pregnant.

As the fetus was alive, woman in good condition, we delayed as long as possible abdominal section, hoping to let child go to viable age.

This was third pregnancy, both other labors normal; youngest child being two years old.

Physical examination showed patient in normal condition.

We waited as long as possible, and on March 29, 1911, after a severe attack of general abdominal pains and vomiting, we, with the assistance of Dr. Thos. P. Lloyd and Dr. Potts, opened the abdomen.

The abdominal wall, as stated before, was very thin; we found a very friable placental sac, which ruptured on handling same, and a fully developed child was delivered; the sac was almost empty of amniotic fluid, and child as well as the walls of the sac was pasted with meconium. The placenta was attached to back of both broad ligaments and posterior surface of uterus. (See specimen.) There were no adhesions to any abdominal viscera.

On examination tubes and ovaries showed no evidence of previous rupture. Finding the uterus very much enlarged and so great were the attachments of the placenta, that we lifted the

entire mass out of the abdomen and removed uterus, tubes and ovaries below the attachments; with the appearance of the darkened sac, and fearing danger of fetal hemorrhage, we deemed this the wise course.

By doing this we could remove the entire mass and not leave anything to give our patient septic fever or infection. The abdominal wound was closed in the usual way and patient had an uninterrupted recovery.

By heroic efforts on part of Miss Aubert, head nurse, the child was saved, being nearly asphyxiated at time of delivery. Mother and child are both well, and I present them to you as well as the uterus with placental attachments.

DISCUSSION OF PAPER BY DR. CALLOWAY.

DR. THOMAS P. LLOYD, Shreveport: I assisted Dr. Calloway in this operation, and it was a most unique and unusual condition we found when we opened the abdomen. We had no trouble in delivering the child, because as we made the incision the membranes surrounding the child burst and the child's head was immediately delivered into the abdominal wound quickly. Dr. Calloway made the wound larger and lifted the uterus. This was an abdominal pregnancy, because the tube, as you see from the specimen, with the increased blood supply, was intact. It did not rupture. If this was at beginning a tubal pregnancy it was liberated into the abdominal cavity early. The placenta was attached to the broad ligament and to the sides of the uterus.

DR. S. M. CLARK, New Orleans: In connection with this interesting case the doctor said he examined the tubes and found them perfectly intact. It occurred to me that possibly this might have been a tubal abortion, the contents having been expressed through the fimbriated end without rupture, and thus dropped into the cul-de-sac and continued on to the full development of a fetus. I remember a case that occurred in the Charity Hospital in Dr. Lewis' service, in which, after taking a careful history of the case, we believed such a thing occurred. She had no great hemorrhage, but just suffered from pain at the time, and Dr. Lewis attempted to deliver this fetus in the abdomen through the posterior cul-de-sac.

I remember one case of great interest that came to my clinic. I did not know if it was a case of abdominal or tubal pregnancy.

The woman gave this history: She was pregnant two years prior to the time she came to the clinic. She went to full term and had pains, but never had any child. Then this mass began to grow smaller in size up to about a year before she came to the clinic, when a bone presented at the umbilicus and she picked it out. She said: "I have been picking bones out of me for the last year, and there is a large one I cannot deliver." I simply dilated this natural opening and got the rest of the skeleton out.

I would like to know from Dr. Calloway if he does not think it is possible for this to have been a tubal abortion that implanted itself in the abdominal cavity.

DR. CHARLES N. CHAVIGNY, New Orleans: I have seen five or six cases of advanced tubal pregnancy, and in all of them the children were invariably dead. Whether the pregnancy was tubal or abdominal in this case, the mere fact that the child was delivered alive and is living to-day, is worth mentioning. Whether it be a tubal pregnancy or tubal abortion, as Dr. Clark has said, the fact that the case went on to term is very interesting indeed.

DRS. O. W. COSBY AND R. H. BLACKMAN, of Monroe, La., read a paper entitled:

Toxemia of Pregnancy; Its Cause, Nature and Treatment.

That the condition known as toxemia of pregnancy is well established at this time, and is recognized and accepted by practically the whole profession, I take it, goes without saying. But just what this toxemia is, what it is due to, and what brings it about, and its proper treatment, are subjects over which there are many and conflicting theories.

Toxemia of pregnancy has been defined by no less an authority than Edgar "as an hepatic insufficiency to which the pregnant woman is strongly predisposed." By Van Leyden as due to the specific kidney of pregnancy, a kind of fatty infiltration, which usually clears up after delivery; by Kaltenbach as due to a nervous or near-hysteria, and is readily amenable to suggestive treatment.

By others it is said to be due to pelvic congestion, intra-abdominal pressure, pressure on the ureters, reflex, and still others to an inherited tendency.

Veit and his school, after Ehrlich had enunciated his side-chain theory, advanced the idea that the condition is due to particles of placental villi being constantly carried into the maternal blood stream, and there dissolved by the fluids of the mother, thus acting as the toxic poison.

And now comes Selheim, who proclaims that the mammary gland elaborates the poison, to which eclampsia is due, and recommends its ablation as the cure.

Williams, of John Hopkins, says "that, as to the origin of this toxemia, we are absolutely ignorant."

For the last two or three years we have been sifting and investigating these different and conflicting theories, most of which seem to have a grain of truth in them, but none of them satisfying in their explanations until some of the more recent investigators whose writings we have followed.

Ewing of Cornell, Stone, Straus, Nicholson, Dittman, Welker, but more especially Sajous, arguing internal secretions, seem to have reached the milk in the cocoanut and offer the most satisfactory, and in fact, to us, the only rational explanation of this very-muchly mooted question.

So that our conception of it is, barring the relatively few cases of reflex vomiting, due to malposition, or disease of the genito-urinary tract; and, of course, those symptoms due to pressure, all the symptoms from simple nausea, or morning sickness, to pernicious vomiting, acute yellow atrophy of the liver, and eclampsia, are due to one and the same thing, varying only in degree, and that this condition is auto-intoxication.

Furthermore, that this auto-intoxication, or auto-toxemia, is the result of sub-oxidation, or deficient oxidation of the nitrogenous products, ingested and from catabolic activity, that the changes taking place in the liver, kidneys and other organs are the result of, and not the cause of this auto-intoxication.

Let us see how this conception comports with reason and the facts in the case, and in what respect this toxemia corresponds with the toxemia of the non-pregnant individual; also why the pregnant woman is more predisposed to auto-intoxication than the non-pregnant.

In answer to the former, in what respect the toxemia of pregnancy corresponds to the auto-intoxication in the non-pregnant,

let no less authority than Prof. Bouff De St. Blaise, one of Bouchard's pupils, answer. He calls attention to the striking parallel existing between them. Common to each are lassitude, headaches, insomnia, polyneuritis, visual disturbances, pruritus, pyalism, dyspepsia, nausea, vomiting, constipation, chloasma, and epistaxis, urinary anomalies, diminished urea, and uric acid, increased ammonia, co-efficient, amino-acids, and purin bodies, leucin, tyrosin, and indican.

Prof. Ewing, pathologist at Cornell, basing his views on numerous autopsies, at first hand, as well as extensive search into literature, affirms his belief that most of the morbidity of pregnancy is due to a basic autotoxic state, and goes so far as to include pernicious vomiting, of the ordinary inanition type, as among the toxic phenomena of the gravid state. He also says that "deficient oxidation of the protein derivative is an active factor in the causation of the toxemia of pregnancy, with accompanying renal condition, just as it is the non-pregnant, and that the seriousness may be established in any case by the determination of the incompletely oxidized protein derivative in the urine."

Dittman says that excessive intestinal putrefaction, as indicated by the marked indican reaction in the urine, is so uniform in its occurrence, that there is room for doubt that eclampsia ever occurs without it.

Edgar says "Nitrogenous substances derived from either ingesta or catabolic activity are most commonly suspected of participating in the toxemia of pregnancy, the failure of the liver to synthesize the lower nitrogenous proteids of catabolism into urea or uric acid."

As to why toxemia is more prone to occur in the pregnant than the non-pregnant, we have only to remember that metabolism is increased tremendously from the beginning; that during the embryonal period a rapid organogenesis occurs; that all the tissues and organs are rapidly evolved from a relatively indifferent matrix, and the responsibility is imposed in the chief hematopoietic organ—the liver. That afterwards the expectant mother must needs eat, drink, breathe, secrete, excrete and eliminate for two instead of one; that with the cessation of the menstruation there is an additional toxic element left in the blood, and that embryonic tissue is very rich in nuclear elements, requiring a

great deal of oxygen, which they remove from the available material supply, causing thereby toxin formation in other parts of the material body from diminished oxygen supply.

This increased demand for oxygen has been worked out by Magnus Levy, who finds the increase needed by the mother to be as follows:

Oxygen utilized during pregnancy:

Non-pregnant	302 c. c. per min
Third month	320 " "
Fourth month	325 " "
Fifth month	340 " "
Sixth month	350 " "
Seventh month	378 " "
Ninth month	383 " "

That even the most simple toxemia, pernicious vomiting and eclampsia are one and the same condition, varying only in degree, is shown by the urinary findings being identical in all these varying conditions—namely, diminished total nitrogen with a decrease in urea, which is normally about four-fifths the total nitrogen, to, in grave cases, less than one-half that amount, with a corresponding increase in ammonia, uric acid and albumen.

Also, by numerous autopsy findings, all showing more or less similar lesions and pathological conditions, Ewing stating that he has never failed to find these changes in the liver of patients who have died of other trouble, even in the mildest cases.

There are also many good clinical reasons for believing that lack of oxidation or sub-oxidation is responsible for this toxemia and eclampsia, as the long established clinical fact that the partially exhausted air of a crowded room, as a theater, for example, is an active agent in inducing an eclamptic seizure in pregnant women. Also, the fact pointed out by a recent writer, that cases of eclampsia occur more than ten times as frequently in indoor than outdoor patients, while there is abundant evidence advanced by psychologists to show that it is by means of an oxidation in the portal vein and liver that the nitrogenous products are converted from the anything but benign products such as leucin, tyrosin, creatin, zanthin, hypoanthin and ammonia, into the practically harmless products of urea and uric acid.

Granting, then, that the conception as has been outlined is correct as regards toxemia, it remains but to show how oxidation takes place; how it is brought about and controlled, and then apply the remedy.

Thanks to Sajous and his masterful work on internal secretions, who has not only grouped, classified and elucidated in a very skillful manner the bewildering mass of evidence, the result of many investigators and experimenters working separately and in the several branches of science, anatomy, biology, pathology and organic chemistry, but has, by original research, proven conclusively that the whole process of oxidation, from the absorption of the oxygen in the alveoli to its delivery to the tissue, is due to and controlled by the adrenal-system, composed of the pituitary body, thyroid with the parathyroids and the adrenal gland, that the anterior pituitary body through the posterior pituitary body, although not a secreting gland, governs and controls the whole somatic and vegetative functions of the body, including the nervous system and the vaso-motor functions of the blood vessels, etc. That this same anterior pituitary body, through a center in the posterior body, governs the actions of the adrenal, one of whose functions is to secrete and furnish to the blood a substance, chromogen, which has so great an affinity for oxygen that it becomes at once the factor in binding or uniting the oxygen received from the air to the blood corpuscles and holds it there, until, coming in contact with some tissue or product which has a greater affinity for oxygen than it has, when it gives up its oxygen, which is replaced by carbonic gas.

That the adrenal secretes a fluid which is necessary to proper oxidation is shown by the fact that patients suffering with disease of the adrenals present the symptoms of suboxidation, such as mental depression, melancholia, muscular weakness, hypothermia, etc., all showing a decreased metabolism.

That adrenal activity is stimulated by the secretion from the thyroid may be proven by the fact that removal of the thyroids in carnivorous animals, or those requiring more oxidation, produces symptoms of adrenal insufficiency which can be remedied by administering thyroid extract, but will return when the extract is stopped.

TREATMENT.—As soon as it becomes known that a woman is

pregnant she should be advised of the dangers that may beset her and given minute instructions as to the care of herself; which should include the keeping of the elimination functions active by the daily bath, drinking plenty of pure water, keeping the bowels well open, by diet, exercise, etc. She should be placed in as pleasant surroundings as available, with as pleasant company and as little to annoy and vex her as possible. She should be kept out of doors all the time possible, when the weather is good, her diet should be restricted largely to cereals, vegetables, fruits, milk and butter, with meat not oftener than once a day. And in view of what we have attempted to show, the frequent examination of urine, of the pregnant woman, becomes all important, for it is only by these careful examinations we can satisfy ourselves as to the real condition of our patient; at least once a month for the first six months, and every two weeks thereafter; the patient being instructed to notify her physician if headaches, disturbance of vision, mental depression, edema or jaundice appears, all symptoms of beginning toxemia.

A twenty-four hour specimen of urine should be measured and the total output of albumen and urea estimated, although a slight amount of albumen (especially if the urea is not materially reduced below 20 to 24 grammes [5 to 6 drams] or about 2 per cent.) is not an alarming symptom; considerable albumen and a diminution of the urea excreted bespeaks danger, and the patient should at once be put on an absolute milk diet, at least two quarts a day, and all the water she can drink. If this does not bring about the desired result, viz., a decrease in albumen, and an increase in the urea-ratio, and free diuresis, the daily use of saline purgative and hot pack or sweat bath should be resorted to. But right here should be emphasized what Dr. Forey has shown: that no patient has ever developed eclampsia who has been kept on a strict milk diet for at least eight days.

If, in spite of the attempt at milk diet, saline purgative and sweating, there is no marked improvement in the eliminative function, as is evidenced by continued headache, disturbances of vision of drowsiness and hebetude, we may add about a dram of chloride of sodium to the pint of milk, which will not only improve its taste, but enhance the osmotic properties of the blood and its antitoxic activity, by increasing its fluidity. As very often

there is fecal retention in these cases, although daily evacuations occur, rectal and colonic irrigations, with one or two gallons of saline solution, is highly valuable.

If after these measures have been resorted to, and the patient is still not in as good condition as desired, she should be kept perfectly quiet in bed, the absolute milk diet continued, and thyroid extract should be given in three to five grain doses, every three hours, to stimulate the adrenal mechanism and increase the antitoxic measure. If eclampsia seems imminent, such drugs may be used as are known to reduce the irritability of the vaso-motor centers, thereby lessening the danger of the impending seizure.

Chief among these drugs is *veratum viride*, in fairly good sized doses, 20 to 30 drops of the tincture, which relaxes the vasomotor centers; bleeding the patient into her own large veins lessening cerebral hyperemia, slowing and quieting the heart's action, reducing tension, and preventing the attack, as it has been shown by many observers that there will be no eclamptic attack with a pulse around 60 or below 70, and a corresponding low tension.

It should be remembered, however, that this is only temporizing, and if we remember what causes eclampsia, we will continue, yea, redouble our efforts at elimination and oxidation and the restriction of nitrogenous intake, as therein *only*, lies the safety of our patient.

Another measure, and one which we think very highly of, is the introduction into the patient by hypodermoclysis of physiological saline solution. Jordon has shown that the mortality in the maternity hospital at Glasgow has been reduced from 47 to 17 per cent. since this measure has been adopted, and the same may be said of it, as of *veratrum*, or other measures that are adopted during an attack; if beneficial then, they are all the more so in preventing it.

ECLAMPSIA.—If for any reason the toxemia should not be controlled, and we are called upon to treat the resulting eclampsia, efforts should still be made to eliminate the poison and control the convulsions before emptying the uterus and sacrificing the child. We have seen that *veratrum viride* better controls the irritability of the vasomotor center than anything else, given in heroic doses, 40 to 60 minims of the tincture, hypodermically, repeated often enough to control the tension, and reduce the pulse,

to say, 60 to 70, which will give time to adopt more curative measures in the way of elimination and oxidation.

Chloroform I shall mention only to condemn, as its effect is only too temporary, besides its use is fraught with too much danger and at the expense of the patient's ultimate recovery, causing very similar conditions in the liver that the toxemia does—namely, fatty degeneration and acute yellow atrophy, conditions frequently seen four or five days after chloroform anesthesia.

The benefits derived from the use of morphin, like chloroform, is artificial and temporary. The arterioles of the skin and kidneys being constricted, their excretory functions are inhibited, hence, morphin should never be used when there is kidney disease, or diuresis is not free.

The bromids, when given in doses large enough to control convulsions, and chloral, act similar to veratrum, in that they reduce the cortical hyperemia by controlling the irritability of the vasomotor center; but, unlike it, they reduce the sensitiveness of the adrenal center, thereby lessening the antitoxic properties of the blood. Morphin and chloral act more happily together than either alone.

Hypodermoclysis of physiological saline solution, about two pints at 110° F., given slowly under each breast, which may be repeated if need be, with venesection before the saline, especially if dealing with a plethoric or cyanotic woman, may be practiced and will aid materially in accomplishing the desired results.

Diaphoresis by hot pack, while possibly a little slower, is much safer and more efficient than pilocarpin. Thyroid extract in full doses, ten grains by mouth, or twice that amount per rectum, will stimulate the failing adrenals and act beneficially; while iodin in the form of iodids may replace the thyroids if the latter is not available.

The thyroid may be used successfully even after the seizures have developed. Cases reported by MacNab, Baldonsky, Vassale, Fothergill, Sturmes, and Lobenstein, attest this; Vassale having used the parathyroid extract with equal success.

CONCLUSIONS: 1. Nearly all the symptoms incident to pregnancy from simple morning sickness to pernicious vomiting, and eclampsia, are only varying degrees of toxemia.

2. This toxemia is due to sub-oxidation or unoxidized sub-

stances, principally of the nitrogenous derivative in the circulation.

3. Urea and uric acid are harmless end products, which can be eliminated as such without trouble, but it is only when the nitrogenous particle is incompletely oxidized, leaving bodies such as zanthin, hypoanthin, ammonia, creatin, etc., that toxemia begins.

4. Both the urinary and autopsy findings show that the toxemia of pregnancy is the same condition as auto-intoxication of the non-pregnant individual.

5. The pregnant woman is more prone to this autotoxemia because of the increased catabolic activity, more sedentary habits, and because of the increased demands for oxidation on account of its fetus.

6. Oxidation is brought about, governed and controlled by the adrenal system, and the thyroid secretes a fluid which stimulates the adrenal activity, thereby increasing oxidation, as witness the physiological enlargement of the thyroid, in normal pregnancies, to meet the demands made on it for increased oxidation, and as shown by Charles Mayo when this enlargement does not occur the woman is in danger of eclampsia.

7. "The internal secretion of the adrenal is the constituent of the hemoglobin molecule, which carries oxygen to the tissues," and in cases of sub-oxidation or adrenal insufficiency, and amelioration of the condition and a cessation of symptoms, or an increased adrenal activity, can and is brought about by administering thyroid extract.

8. *Veratrum viride* is the very best remedy we have in eclampsia for lessening the irritability of the vasomotor center, lowering vascular tension, and relieving the attack. Chloroform is not safe on account of its liability to produce degenerative changes in the liver, and morphin is only an artificial remedy, which should never be used when there is any kidney disease or diuresis is not free. Chloral and the bromids, when used in large doses to control convulsions, act similar to, but are not as desirable as *veratrum*.

9. Combined with the above, elimination and lessened proteid ingesta are the only rational methods of combatting this toxemia.

10. Physiological saline solution, preceded by venesection in

suitable cases, is one of the safest as well as the surest means of preventing eclampsia during the pre-eclamptic period, as well as controlling and relieving the seizure.

11. It is the duty of the physician in every case of pregnancy in which he expects to act as accoucheur, to inform the patient of some of the dangers incident to pregnancy; to give her full and minute instructions in regard to her diet, exercise, elimination, etc. Also, to examine a 24-hour specimen of urine every four weeks during the first six months, and every two weeks after that, not only for albumin, but more especially for the total nitrogen, amount of urea, casts, etc., and, when evidence is found that elimination is substandard, to put the patient on an absolute milk diet, plenty of water and administer thyroid extract to increase the adrenal activity and oxidation.

12. Without going into a lot of case histories, which are usually tedious and tiresome, and would prolong the paper too much, suffice it to say that for two years we have used thyroid extract with the elimination measures outlined, in all degrees of toxemia or adrenal insufficiency with the most happy results, proving its worth to our own satisfaction beyond the shadow of a doubt.

DR. A. C. KING, New Orleans, read a paper entitled:

The Various Anesthetics as Applied to Obstetrical Work.

Our knowledge of anesthesia dates back scarcely more than half a century. To be correct, 1846 witnessed the dawn of an era wherein the pain incident to surgical and obstetrical operations has been reduced to a minimum by the various methods of inducing anesthesia now at our command. Physician and surgeon alike recognize the great value of the many local and general anesthetics within reach, and he who dares do any operation, minor or major, without first inducing insensibility to pain, surely places his reputation in jeopardy. Yet some of the very men who so willingly relieve surgical pain will permit a woman in labor to suffer all the agonies of childbirth rather than use a little chloroform, a little ether or a little of something else, thus converting an exquisitely painful act into one of comparative comfort.

You may argue that this is physiological pain and *has to be*; that it is perhaps nature's way of exciting maternal love; that it is a necessary kind of pain, and so on. That may be all true, but have you ever stopped to consider that this is also *genuine* pain; the kind that actually exists rather than the Christian Science variety? That it hurts just the same? That women have feelings as well as men? Even if it is a physiological act, it produces more discomfort within the space of a few short hours than *all* the other purely physiological acts of that woman throughout her entire life time. Did you ever consider the matter from that standpoint? Remember the old saying: "If the wife has the first baby, and the husband the second, a third is sure never to be born!"

It has frequently occurred to me that it might have been a wise provision of Providence to make every practicing physician engaged in obstetrical work have one baby by way of experiment. Such a calamity would most certainly tend to awaken his slumbering sympathy and would beyond a doubt serve to jerk his latent obstetrical skill into sudden and wholesome activity. It would also be rare sport for the audience.

We doctors become callous and indifferent to pain suffered by the other fellow; often too much so; and particularly does this appear to be true in the case of the parturient woman.

Anesthetics would perhaps be more generally used in normal labor were it not for the universal fear of increased liability to post-partum hemorrhage. This fear has some ground, in so far as chloroform is concerned, but does not hold good with ether, though in some eight hundred cases where I employed mostly chloroform, my experience does not justify this statement. However we recognize the fact that ether is the safer of the two, and I believe the time is now at hand when the latter will supercede chloroform in the field of obstetrics, just as it has elsewhere. Even in the face of a possible hemorrhage, the relief given the woman is so great that the risk is well worth taking. Whether bleeding is expected or not, go prepared for it as regularly as you do for other emergencies. Forewarned is forearmed, and one disastrous experience is all that will be required to put you forever on your guard.

When first I was let loose on an unsuspecting public all sorts

of fears filled my mind in regard to using anesthetics in maternity cases, and I am free to admit an unjustified prejudice prevented my using anything to relieve the sufferings of these women. About this time, some thirteen years ago, I came across an article written by an intelligent mother, the wife of one of our Northern confreres, printed in the *New York Medical Journal*, in which she gives her personal experience in going through several labors with and without an anesthetic. Her husband unfortunately was brim full of the same brand of prejudice that has blocked good deeds in so many of us, and persistently refused the wife that relief which was most certainly her due. Finally, however, after many labors and much suffering, he used on one occasion enough chloroform to produce about half anesthesia, and, much to the pleasure and astonishment of both doctor and patient, the event came off smoothly and almost painlessly.

The wife sums up her opinion in these words: 'The relief I experienced was indeed a revelation to both myself and husband, and was so truly remarkable that could all physicians realize the great blessing chloroform is at this time I am sure no parturient woman would ever again be denied relief from the agonizing pains of childbirth.' She adds: 'My husband received one of the best and most profitable lessons of his life, and is now a firm believer in anesthetics in labor cases.'

This husband, gentlemen, was not the *only* one to get religion; my wife's own husband also became a convert and has been a strong advocate of some form of anesthesia in these cases ever since. Right here I wish to make this statement: Students of medicine, even internes in some hospitals, are not taught the art of relieving their patients during labor. This is surely a mistake in the light of modern experience. They receive instruction in all branches of obstetrics, and are even taught to handle complications, but never a word in regard to this very important matter of relieving the ordinary pains of labor. A normal woman must have a normal labor the same old-fashioned way and kick up just as much fuss over it as did her great-grandmother a hundred years ago.

Another statement: A mother delivered the first time without an anesthetic, the second time with, will invariably insist upon having an anesthetic during each subsequent labor, and when

little pains grow into big, *painful* pains and get to be unbearable she will plead pitifully for relief. Therefore, gentlemen, I desire to engage the attention more particularly of the general practitioner along these lines, since it is *to him* the greater part of this work comes, and it is a duty he owes to his patients to afford relief at a time when it is most desired and most needed. This subject is well worth his serious attention and study, and if he expects to do good work along modern lines he must adopt modern ideas and methods.

Now, what benefit do we derive from the use of anesthetics?

1. Relief from pain—pain as only the parturient knows it; as one poor woman expressed it, “pain all over.”

2. Absolute control over your patient at all stages of the game. Control of the advancing head, of the perineum, of everything. You are “boss.” The soft parts all relax to good advantage, thus permitting the fetal head to escape with less damage than would otherwise be the case. Often it becomes necessary to retard the advancing head until perineal relaxation is complete, and in many cases the head can be delivered *between* pains, the attendant slowly and leisurely slipping the perineum back over the face, while his patient is quietly dozing. This is a decided advantage, as often an unanesthetized woman will spit out the fetus so quickly that lacerations are unavoidable, and it is certainly better and more to your credit to spend an hour preventing a tear than half as long exhibiting your skill in repairing a preventable damage.

3. Pains are usually more efficient, and in a large number of cases the second stage is considerably shortened.

4. Frequently instrumental delivery can be avoided *because* of better pains and greater relaxation, but if interference should be required preparations can quietly be made and assistance secured without the mental distress on the part of the woman usually occasioned by such a necessity.

5. Removal of the placenta is made easier, and should it be necessary to extract by hand, the half-anesthetized patient is certainly better handled than a squirming, kicking one. I recall a case in which complete inversion of the uterus occurred, where I peeled off the placenta, packed the vagina around the organ, re-sterilized things, secured a kitchen table from downstairs, sent for

assistance, placed the woman on the table, slipped on a glove, continued the anesthetic and reduced the inversion without her knowledge of this frightful accident. She recovered.

Of course, care must be exercised in using chloroform and ether, and the contra-indications kept in mind. The former is considered to be especially contra-indicated in acute anemia, uncompensated heart lesions, sepsis, nephritis, severe material exhaustion and eclampsia if a long anesthesia be required. Ether should not be used in quantities at night unless with electric lights, nor in emphysema, nor in acute inflammations of the lungs and bronchi. In an ordinary case the procedure would be about as follows: Give the anesthetic only during the second stage if possible and then only after the presenting part is down to the pelvic floor and a fair degree of dilatation has occurred. This refers to the general anesthetics, ether and chloroform. An open mask is to be used, the drop method employed and enough of the drug given to produce half anesthesia. A little practice is necessary to get accustomed to the difference in dosage as required by different women. Anyone of a fair degree of intelligence can manage it, but the administration must be watched. In using chloroform the vapor should be well diluted with air, while with ether this is not essential. At first use the anesthetic *only during uterine contractions*, but later insensibility can be produced as the head passes over the perineum, and it is at this time that the physician has opportunity to do his finest work in preventing lacerations of the soft parts.

Pregnant women enjoy a most remarkable immunity from the dangers of chloroform, but after the child is born this immunity seems to cease. This *may* be explained by the fact that labor pains have a stimulating effect upon cardiac enervation, which is absent after completion of the second stage and the "physiological anesthesia" attendant upon cerebral congestion induced by bearing down efforts disappears after this stage, therefore a continuation of anesthesia for any purpose calls for a relatively larger amount of the drug, thereby *increasing* the danger. Ether is the safer, and is coming into more general use along all lines.

Spinal Analgesia.—To Corning, Bier and Tuffier we owe a debt of gratitude for their remarkable experiments and researches in this field. This method has been extensively used in surgical work with varying degrees of success, but has not been applied to

any large number of obstetrical cases. Quite a few cases have been reported where some one of the drugs used intra-spinally has been employed in desperate conditions with success. Cases so bad that a general anesthetic could not be used. The field, however, is limited, and there is some danger, Hohn reporting some time ago 8 deaths in 1708 cases collected from literature on the subject. We are due to learn something more about this method as applied to obstetrics.

Chloral Hydrate has a field of usefulness all its own; under its influence the severity of pain is undoubtedly diminished and between pains the patient is drowsy and comfortable. Chloral is particularly useful where cervical dilatation is slow and in nervous and sensitive women and in cases where the severity of pain is out of all proportion to the progress of labor. Fifteen-grain doses at half hour intervals until 30 to 45 grains are given is generally sufficient. Double the quantity per rectum. This is one drug used by intelligent midwives with success, and I know of some who use it as carefully as any physician, and I also know of one prominent and successful practitioner who gives his patients 5-grain doses every night for three weeks prior to the expected date, and morning and night a few days before delivery.

Morphin by mouth or hypodermically is often useful, especially when anemia or debility renders other drugs inadvisable.

Cocain locally applied to the cervix produces a very limited degree of anesthesia during the stage of dilatation, but its use is dangerous on account of possible absorption, or sepsis, due to manipulation. Other anesthetics are certainly safer and easier of application, and chloral will do everything required of cocain, and do it better.

Nitrous Oxid can be used to good advantage in hospitals, but is almost out of the question in private practice on account of the bulky apparatus required for its administration. Again, the expense is quite considerable. Here, again, other drugs can be employed and equally as good results obtained.

Scopolamin-Morphin anesthesia is the latest addition to this happy family. In 1907, '08 and '09 Gans reports its use in 1,600 cases in Kronig's clinic in Freiburg, Germany, with the sole object of relieving labor pains. This combination produces in the mother a condition called "twilight sleep," a state of somnolence resem-

bling that of a patient partially narcotized with morphin. Gauss expresses himself in these words: "The word of half-narcosis does not fully express this remarkable state of consciousness. The patient is in a state of sleep out of which she can be awakened or awake at any moment, but at the same time she shows amnesia during the whole period of injections." As soon as labor becomes active, pains at five-minute intervals, an initial dose of 1/150 gr. scopolamin and 1/6 gr. morphin is given hypodermically. This is repeated at the end of from one to two hours unless the patient shows marked reaction to the first dose. In case of reaction the dose is not repeated until the effects of the drug begin to disappear. The injection is not to be repeated after the cervix is two-thirds dilated, it being best not to risk a continuation of the drug effects after delivery.

Gauss is enthusiastic over the results obtained, but in dissecting his records I find that quite a large percentage of the babies were born asphyxiated, requiring vigorous resuscitation. Of the last 609 reported cases, 31 children were in asphyxia, 9 dying within 3 days, 7 others stillborn, while 10 were non-viable. Dr. Maurans, in 1905, collected from literature 22 fatal cases following the use of this combination, clearly indicating that this method is not entirely devoid of danger.

Freeland and Solomons, of Dublin, report favorably on 100 cases of *prima paræ*, but call attention to a point omitted by Gauss, namely, not to begin the drugs until quite sure labor is in progress, and they attribute the loss of some children to the too early use of the combination. In this country, Franklin S. Newell, of Boston, has had excellent results in over 250 cases, and in a recent personal letter to the writer sums up his experience about as follows: No bad results from the maternal standpoint. No cases of post-partum hemorrhage; in fact, a smaller quantity of blood than usual is lost. Definite relief from pain in 85 to 90% of cases. Judging by pulse, temperature and general condition, patients are in better shape than when no anesthetic is used. He gives no figures as to asphyxia, but says fetal mortality is no higher than in other cases. Newell further says that labor seems to have been definitely shortened, while the necessity for operative interference has been reduced. He uses only 1/500 gr. scopolamin with 1/6 gr. morphin and repeats it if required.

So with this array of pain relieving drugs at our command, our parturient women ought to fare better than they do, and when we consider the fearful havoc wrought by puerperal septicemia in pre-aseptic days, the awfulness of instrumental delivery in pre-anesthetic days, the thousands of maternal and fetal deaths in pre-forceps days, is it not time to give our women the benefit of all the knowledge and skill at our command? Therefore, gentlemen, I again make an appeal to you to relieve the modern American mother by our modern American methods.

DISCUSSION OF PAPER BY DR. KING.

DR. CHAVIGNY, New Orleans: This paper is very timely. Every doctor who practices midwifery should be ready to employ an anesthetic in the second stage of labor. I find that if, in the second stage of labor, we simply give a little chloroform or ether just as the head is about to come over the perineum, it relieves the excruciating pain of labor. In addition to that, if you give the woman a small amount of chloroform, but not enough to put her in an unconscious condition, but simply enough to relieve her of pain, she has the ability to contract the muscles of the abdomen and to help uterine contractions. Chloroform is much better than ether in these cases, as you can use very small quantities of it, and the women go under it much quicker.

It is a well-known fact that pregnant women are immune to chloroform to a considerable degree. It would seem that they can take anesthetics with impunity when in that state. We know that in severe cases of eclampsia, where the urine is in bad condition, the women will take chloroform; I think ether is preferable. They take it without trouble, and it is rare to see a death from such an anesthetic in obstetrical work, even in cases of extreme eclampsia.

DR. J. S. BRANCH, Elizabeth: I want to call attention to one point which I have never heard discussed or read about. I always use chloroform, and never ether, for this purpose. My point is this: Just before the patient gets to the point of unconsciousness, if you will withhold the anesthetic for a while, you will get the best results. Sometimes you have a little lagging in the uterine contractions; the woman is not conscious of the pain, still the sense of hearing has not been destroyed. The patient will do any-

thing you tell her to do; she is hypnotized at the time, and you can place the hand over the abdomen and, by palpation and telling her to bear down, you can urge the patient, and in this way get excellent results. The pains may stop for the time, but, with a little prompting of this kind, you can go right on. I think it is criminal not to give a patient some anesthetic in this condition, because it is not calculated to do any harm, and will do the very greatest good to the woman.

DR. G. H. CASSITY, Shreveport: In seven years of country practice I have had a number of obstetrical cases, and when scopolamin-morphin came out I resolved to give it a trial, in order to ease the labor pains of women. I used it in ten cases close together. I had two babies who were badly asphyxiated, and one death, and I concluded it was a dangerous drug. I tried to find out what results other physicians had had with the use of this drug, and I made it my business to investigate the results of other physicians practicing in my country, and I found that their results were just as disastrous as mine. My investigations covered 150 or 200 cases, and they showed that about a third of the infants would be asphyxiated from the drug. The results in the women were absolutely beautiful, if given after the first stage was completed. I had no post-partum hemorrhage, nor any untoward effects from the side of the women, yet, from the side of the infant, it was not at all to my liking.

As regards anesthetics in labor, my preference is for chloroform, first, last, and all the time, with chloral hydrate added in nervous women. With the two, women can be tided through labor without any undue suffering.

DR. C. N. CHAVIGNY, New Orleans, read a paper entitled

Injuries to the Parturient Canal During Labor.

The advances made in obstetrical surgery during the past five years has prompted me to take up a subject which comes within the scope of the general practitioner, although simple in its correcting, but often overlooked, either from carelessness or neglect. The soft tissues of the female pelvis are so situated and so con-

structed as to give them the physiological function of supporting the entire abdominal viscera. We therefore find, on first thought, that we are dealing with two constrictions, which must, of necessity, dilate to allow the passage of the child. At these two sphincters—namely, the cervix and perineum—we have practically all the resistance that is offered by the soft passages to the passenger, or child.

A consideration of the method of dealing with the cervix uteri and perineum, mentioning the vagina as a connecting link or lake between the two straits, we will, I believe, have a fair idea of the common or more frequent tears we meet with in ordinary obstetrical practice.

Injuries to the fundus uteri, such as rupture of that organ, which is of rare occurrence, do not come within the scope of this paper. The only portion of the uterus, the dilatation of which we all know is the first stage of labor, that needs consideration, is the cervix. The repair of the cervix up to the present time has been practically neglected. Authorities like Williams, Jewett, Edgar, Playfair and Hermann hardly mention it in their text. I believe that, with the modern tendency of deliveries in private hospitals, the practice of cervix repair immediately after delivery will become more general. It is quite important that this should be, as there is no valid reason why a cervix, any more than a torn perineum, should be left unrepaired. The prevention of cervical tears is impossible; every woman that has borne a child has a laceration of the cervix in some degree, be it very small or very extensive. The very fact that the gynecologist can tell in an instant, just by the touch of the cervix, whether a woman has borne a child or not, shows conclusively that the cervix is lacerated in all cases, so as to permit of the difference in size and consistency to make the difference between a para and a nullipara.

The suturing of a tear should not be difficult to the general practitioner, when we remember the condition of the uterine ligaments, which enable the cervix to be drawn very easily to the vaginal orifice, permitting a thorough inspection and allowing us to suture the rent. Catgut chromicized or iodized, No. 3, should be the material used; an ordinary curved surgical needle is better suited than the regular cervical, or Emmett needle. The only precaution necessary is not to enter the cervical canal, and yet come

right up to it; also, make certain that the two raw surfaces are directly in contact, so that there will be no overlapping. Quite different from gynecological repairing, we should make the suture as tight as possible, so as to avoid non-contact, which is liable to occur when the edema leaves. No attempt should be made to irrigate the tear, unless indication of septic absorption, when the usual vaginal or uterine douche would be used. The sutures are to be left in and absorbed—the great advantage of catgut over other sutures material, as it is not always easy to remove them, especially where the perineum has been repaired, apart from the unsurgical and after-effect of granulating self-repairing injuries of the cervix. We must not fail to consider the possible danger of infection through the channel, and again in extensive tears, the possibility of atresia cervicis occurring in severe cases. Also the necessity, in extensive cases, of stopping hemorrhages, which, as a rule, come from the circular artery, and in rare instances the uterine artery has been torn through.

I wish to mention a case of atresia, which occurred in the white obstetrical service of the Charity Hospital last winter, which showed some interesting features, at first resembling cervical atresia, but during labor found to be atresia of the upper part of vagina.

Mrs. A. B., white, aged 37 years, admitted to the white obstetrical ward of the Charity Hospital on May 3, 1910. Family history good; mother's death accidental; father died from cerebral condition. History of two children, last child four years old; labor in both instances was normal, no forceps necessary, nor was there any rise of temperature following the deliveries, and the patient got up and was about on the ninth day. Vaginal examination showed an absence of the cervix; on close inspection, a small sinus, or opening, could be seen in the upper portion of vagina, hardly larger than a No. 6 catheter.

Pains began at 3 p. m., October 30, 1910, and continued all that evening and the following day, when surgical intervention was deemed advisable. A still-born child was delivered at 9:40 p. m. of the 31st. Delivery was effected by forcible tearing away of the vaginal adhesions, which then brought the cervix into view. The child was then delivered by podalic version by Dr. Cole, as there was a prolapse of the entire funis, which in all probability was the cause

of the fetal death, of course assisted by the long and protracted labor. She made an excellent recovery, and left the hospital three weeks after delivery.

Since there was no traumatism, other than that usually attending a normal case of labor, and the patient states she had no fever following, I am at a loss to state the reasons why atresia should have taken place. The atresia was undoubtedly of the upper portion of the vagina, which is most often the case, as cervical traumatic atresia with after-pregnancy is rarer. An interesting fact is the possibility of pregnancy in the presence of such a small opening, or almost complete atresia. As I have stated before, cervical lacerations are rarely the cause of cervical atresia.

Although the days of extensive lacerations of the vagina, which often produced large sloughs of that canal, resulting in vesicovaginal fistula of large size, and vesico-uterine and cervical tears of smaller caliber, are past, we still have to contend with vaginal tears, and especially of the upper part, as a probable cause of hemorrhage and an avenue of infection. The anatomical relation of the supporting structures of the vagina are such that the upper part is the portion most subject to injury. They usually occur in elderly primiparæ; the vagina, being rigid, tears instead of stretching. The posterior wall is more often torn, owing to the greater distention; the lower portion is better supported than the upper; the pelvic fascia and muscles are here attached to it. Since the application of forceps is becoming to be better understood and more used by the general practitioner, we find tears of an extensive nature, but not deep, occurring principally when they are employed. Hermann states that tears of the vagina by forceps are produced in three ways: (1) the child is often suddenly dragged out, without giving the soft parts time to stretch; then the vagina may be torn, if the head is high up, just as the perineum is torn when the head is low down; (2) if you try to rotate the head, the effect is to raise slightly one of the forceps blades and press the other more strongly against the skull. The raised edge may cut the vagina. This may happen without any conscious attempt at turning the head around, simply by not holding the forceps in such a manner as to keep the blades flat to the head; (3) when the head is pulled down, the mucous membrane of the vagina is often displaced and separated from its submucous tissues;

as the head advances, the vaginal mucous membrane may be torn through, owing to compression between the head and some bony point; then, in consequence of the displacement of the mucous membrane after delivery, the wound in the vagina may not correspond in position to the bony points that caused it, but be above it, and the wound in the mucous membrane, with the injured cellular tissue, forms a pocket, opening upward.

As a rule, no special attention is paid vaginal tears; they usually heal by granulation. Excepting when hemorrhages are caused, they should be sutured, and, when they are the point of infection, they should be kept thoroughly cleansed with hot bichlorid (1/5000) vaginal douches, twice or three times daily.

It might be well to mention the rarity of vaginal tears involving the entire thickness of the vagina, and principally the bladder, resulting in the dreaded condition of vesico-vaginal fistula of former years. In twelve years of practice, hospital and private, involving over 1,200 cases, I have yet to have a patient come back with a vesico-vaginal fistula, or any vesical fistula, following labor. This, I believe to be the experience of all obstetricians, and which would be readily agreed to by the gynecologist as the heretofore mender of the obstetrician's errors.

The operations devised by Sims, Kelly, Freund, Simon Von Winkell and others will, with the modern use of forceps, Cesarean section and pubiotomy, be the only ones of record and in the literature.

The perineum, owing to its position, size and anatomy, is perhaps the most important portion of the parturient canal—the one by which, through the proper management of the case, untold suffering of the future can be avoided. The anatomy of the female perineum, owing to the important position and function of practically supporting the entire viscera, is necessarily complex, and particularly as to the different attachment of its fascia and muscles, which structures form the foundation of this important wall, and the ones principally to be taken into consideration in its repair.

Since superficial tears, as those of the fourchette, do not involve structures of a supporting nature, no consideration is necessary other than a continuous catgut suture. Oftentimes these tears left unsutured heal by the simplest apposition of the parts; nevertheless, it is bad practice to depend upon this apposition, even in such

slight lacerations. In a studying of the muscles of the perineal body we find the following important muscles: External and internal sphincters ani, the levator ani, and transverse perineal, the posterior extremities of the bulbo-cavernosi and sphincter vaginal. These muscles, coming off from the ischial and pubic portion of the innominate bone, are inserted, you might say, into each other in a central raphe. The triangular ligament, or deep perineal fascia, is a dense membranous lamina, which closes the front part of the outlet of the pelvis. It is triangular in shape, about one and a half inches in depth, attached above by its apex to the under surface of the symphysis pubis and subpubic ligament, and on each side to the rami of the ischium and pubis. Its inferior margin, or base, is directed toward the rectum, and connected by the central tendinous point of the perineum. It is continuous with the deep layer of the superficial fascia behind the transverse perineal muscles and with the thin fascia, which covers the cutaneous surface of the levator ani muscles (Anal or ischio-rectal fascia—Gray.) It is perforated by the urethra anteriorly and vagina posteriorly. The importance of this fascia is at once seen; special care, therefore, should be taken to bring the torn edges together, as well as those of the torn muscles. I have seen cases where neglect to bring together the above anatomical structures resulted in nothing more than the well-known paper-shell perineum, which looks fairly good to the eye, but has absolutely no body, and gives no support. This kind of perineal repair is to be condemned, and unfortunately occurs too often, due, no doubt, to the lack of appreciation of the anatomy of the perineum.

Our efforts should be directed to the proper management of the second stage of labor, to avoid laceration, but, be as careful as we may, they are oftentimes unavoidable. We should, therefore, in every case, have the necessary sutures material and instrument at hand to do an immediate repair. Do not wait until the following day to do something, that should be done at once, any more than you would have a patient with an incised wound come back the next day to have his wound sutured. I mention this because it is astonishing to see the number of men who have not the means at hand to do this simple little operation and allow their patient to go neglected, from practically the only complication that requires the skill of a physician in a normal case of labor.

Lacerations of the perineum usually begin at the anterior fourchette and extend backwards, depending upon the stretching power of the tissues, on the suddenness with which the dilatation is done and upon the size of the dilator.

The head is usually the cause of these ruptures. I have seen a few cases where the head caused no laceration, but quite a laceration resulted from the too rapid delivery of the shoulders. We should be guarded against this, as one is prone, in slightly delayed shoulder, to pull on the shoulders, owing to the extreme cyanosis of the face occurring in those cases. When to apply traction, and just how long the child can remain in this position, is one to be judged by the individual case and the obstetrician's experience.

The head should always be supported until you feel certain that the perineum has reached the point of dilatation where it will allow the head to pass without rupturing it. The use of lubricants and massage are of small benefit, and should not be depended on.

Rare tears of the perineum are on record where the child's head entered a rent in the vagina, plowing its way through the muscles and fascia of the perineum, causing a complete rupture. This form of tear is called central rupture of the perineum.

Hermann observed a case where, after the head had been delivered, the hand protruded through the arms, and then the shoulders came down, tearing asunder the perineum from above downward.

The classification of perineal tears into complete and incomplete tears is simply one of degree. Complete tears involve the rectum, while incomplete ones do not.

The suture material for perineal repair should be catgut, reinforced by two or three silk worm gut, so as to insure against the too rapid absorption of the catgut. I have seen two cases where the catgut gave way from absorption on the fourth day, allowing the wound to open up; with a couple of reinforced sutures of silk worm gut this would not have occurred.

Cases of neglected repair of a few days, as might come under observation from the practice of midwives, can be sutured by scraping the granulation and then suturing as a fresh wound, with fair results. The practice of irrigation by douching should be discarded, only irrigating when urine is voided or bowels act. The continual irrigation has a tendency to soften the tissues, thereby

preventing healing. Limbs should be kept together and patient kept in bed not less than twelve days; silkworm gut sutures should be removed about the tenth day. The patient should not walk for at least fifteen days, and then be cautioned to keep thighs together. A thorough examination of the part about two months after delivery should be made, as anything overlooked can be corrected before the case has become accustomed to the new condition, then only with difficulty can we get our patient to submit to the necessary operation.

DISCUSSION OF PAPER BY DR. CHAVIGNY.

DR. A. C. KING, New Orleans: There is one point that has not been brought out, and that is, when to suture the perineum and cervix. In the past we usually sutured the perineum and forgot about the cervix. We have learned by experience that this is a mistake—at least I have. The best time to suture the perineum and cervix is from twenty-four to thirty-six hours after delivery. By sewing it then we make a better approximation and obtain better results.

Another point is with reference to sewing up the perineum and cervix of a woman in a private house. If you operate in a private house you will get just as good results, provided you wait. You can resterilize everything, and during the twenty-four or thirty-six hours your patient has slept and is fresh and everything is in the pink of condition, and you can sew up the cervix at your leisure, as a rule getting good results. There are general practitioners who consider themselves capable of delivering a woman of a baby, yet who do not feel capable of repairing lacerations of the cervix and perineum. It is not much trouble to do this work, and the results *you* get certainly pay you for the trouble you take in sterilizing things and being prepared to do the work.

Sometimes you will find the uterus filled with clots. I believe it is a serious mistake to leave these clots in the uterus. Some of our cases of infection are due to clots having been left in the uterus. I make it a practice to use gloves in this work, and just as certain as I am going to sew up a cervix, I slip my gloved hand into the uterus and clean out this organ absolutely; then I take dry gauze and wipe out the uterus. I do not think it does harm,

provided the gauze and gloves are sterile. I have never had a particle of trouble from that practice.

DR. CHAVIGNY (closing), in answer to the question as to the suture material, I prefer, in fresh obstetrical tears, to use silkworm gut; as a rule, those sutures are through and through, including muscle, fascia and skin. I find that, owing to the vascularity and moisture of those parts that catgut is sometimes absorbed too quickly, with very bad results. In the ordinary repair of gynecological tears, where tier sutures are used, I prefer using catgut for the buried and sutures and reinforced this suturing with two or three silkworm gut sutures.

DR. MARION SOUCHON, New Orleans, read a paper entitled

Perineal Uretero Lithotomy in a Male.

Mr. E S., white, age 45. The history in detail I consider useless, as it can be summed up as one typical of intermittent hydronephrosis, presumably due to the passing of renal calculi; each time followed by cystitis and strangury, with bloody urine.

The patient had had five such attacks over a period of two years. His bladder had been washed out for pus, and his prostate assiduously massaged because of extreme tenderness in that region argued disease of that organ.

My connection with the case began in June, 1910, when the patient, greatly emaciated, came to me to have his prostate removed. removed.

The history answered stone at every question, and great was my disappointment that the bladder did not harbor one. He had carefully strained his urine for days following each attack of colic, in the hope of recovering a small calculus, but unsuccessfully; while the typical attending symptoms left no doubt as to the cause of the intermittent hydronephritic colic.

Examination per rectum showed a prostate of normal size; and while sweeping the finger past the right lobe the patient complained of excruciating pains. By bimanual examination, as in the female, I could, by bringing down the bladder, distinctly feel a small hard body about the size of a pea, above and to the right of the prostate.

It immediately occurred to me that I was feeling a stone in the ureter near its vesical termination, and followed that line of investigation.

The cystoscope revealed a thickened mucosa, a normal left ureteral orific and an everted red and angry-looking right ureteral opening. Catherization of left side was easy, but the right one could be entered for a distance of half an inch barely, while a distinct resistance could be felt.

The urine report of left side was normal, while pus and blood were reported from the right.

There was no doubt in my mind that the diagnosis was established, and, to further strengthen it, I referred him to Dr. A. Granger for X-ray corroboration. This was done on July 13, 1910, when he reported calculus, probably in right ureter. Being sure that I felt a ureteral calculus per rectum, I then determined to remove it per perineum.

Not being familiar with the technique of perineal uretero-lithotomy, I reverted to my book shelf for information. Great was my amazement that of fifteen advanced surgical works consulted, there was only a passing reference that it could be done.

With some experience in perineal prostatectomy, and with sixteen years' connection with the dissecting room of Tulane University, I felt no hesitancy in undertaking the removal of a ureteral calculus by what was to me a new route.

The operation was performed at Hotel Dieu on August 15, 1910, Dr. L. Levy assisting, and in the presence of Drs. C. W. Allen and J. T. Nix.

Now, gentlemen, inasmuch as I challenge any one to show me the description of this operation in any surgical work, and believing that it does not exist, I beg leave to be allowed some detail.

The ordinary inverted V-prostatectomy incision was made, and with staff in the bladder the Young technic for prostatectomy was followed up to the point of opening the urethra and of using the tractor.

Instead of using the tractor I used the volsellum on the prostate, which greatly assisted in bringing up the base of the bladder. Denonvillier's fascia was opened, the right lobe of the prostate was passed, the vas exposed and pushed aside, and by the sense of touch the stone was readily located.

With deep retractors it could be reached with comparatively little difficulty. The ureter was opened longitudinally and the stone delivered with ease. This was followed by some ooze and discharge of urine.

The next step in the operation, that of suturing the ureter, was the only tedious part, because of the narrowness and depth of the wound and the smallness of the needle necessary to the work. It was accomplished, however; silk being used. A small drain was left in case of leakage, and the wound closed with silkworm gut.

The patient stood the ordeal without any shock whatever, the operation lasting about a half hour.

Nothing untoward happened until the third day, when the dressing became soiled with urine from a small fistulous opening from the perineum. The drain was then removed and not replaced, but the leakage continued until the tenth day when the wound was completely healed.

The patient has been completely cured, and, I must add, that several ureteral catheterizations show no cicatricial contraction and allow a free passage of catheter.

To complete the record of this case, I wish to say that the stone is shaped like, and about the size of a pea. This fact will, I believe, explain the intermittent hydronephrosis, which a change of position of the stone could readily cause.

In searching American literature most thoroughly, I have been unable to find a case operated on similarly in this country, and the only case that supersedes this one is that of E. Hurry Fenwick of England. Fenwick's case was operated in 1892 and reported by him in 1898 in the *Edinburgh Medical Journal*.

In his article he recognizes that several instances are recorded, the vaginal route being followed (Emmet, Cabot, Rigney, Cotterell), but is not aware that the perineal route had as yet been advocated in the male.

B. Schenck, 1903, in *John Hopkins Hospital Report*, gives a most exhaustive review of impacted ureteral calculi, and cites but one perineal operation.

In an article that appeared in the *Annals of Surgery* of 1907, by Hugh M. Rigby, we find the following criticism of Fenwick's perineal operation: "This operation has peculiar risks attached to it, without mentioning its difficulty; there is real danger of

wounding the rectum, hemorrhage is usually free, the vas deferens may be damaged, and it is quite impossible to apply sutures to the ureteral wall."

All this criticism is not well taken. The danger of wounding the rectum is small if you have a practical knowledge of anatomy; and once the recto-ureteralis is cut the rectum is safely out of the way. The vas, with its peculiar structure, is easily felt, and none but an inexperienced operator can overlook it.

The hemorrhage is not sufficient to disturb even a beginner, and with the aid of retraction all ooze is controlled. The suturing of the ureter is no more difficult than the suturing of the common bile duct.

Dr. E. Cotterell, in the Proceedings of the Royal Medical and Chir. Society, London, 1893, reported two cases of uretero-lithotomy in the female. In the discussion following, Dr. Godlee stated that he had met with several cases of stone impacted in the ureter requiring surgical treatment, one, a young man from whom Sir Joseph Lister removed some renal calculi by lumbar incision; he had previously passed stones and one had been removed through a perineal wound.

It has been absolutely impossible to establish the status of this case, and until some record can be found I will not include it.

Mr. Reginald Harrison suggested that in man the calculus should be reached by perineal incision. He had not had occasion to select this route, but remembered a case of a boy where it was quite possible to feel a stone in the left ureter with the finger in the rectum. The patient died and the postmortem revealed a stone in the position that was made out during life by above method of examination.

One of the first to feel a stone per rectum was Rawdon (*British Medical Journal* of February, 1879). He felt it in a boy six years old. Diagnosis was verified at autopsy.

Israel found stone in the lower ureter per rectum in seven of fourteen cases. Young, one in four. Hume, of New Orleans, felt it in three cases.

Hugh Young, in Watson and Cunningham, 1908, gives a summary of results obtained by the different methods of treating calculus impacted in the lower ureter, and tabulates but one perineal operation, presumably Fenwick's case.

In conclusion, I would wish to clear the atmosphere for any discussion which may follow by the following admissions and contentions:

1st. The inguinal operation, extra or trans-peritoneal, has its indications clearly established for stones impacted in the pelvic ureter, and the perineal operation is not here advocated in its stead.

2nd. There has been insufficient experience to condemn this route, discouraged possibly by the mutilating para-rectal and trans-sacral routes of Cabot and Morris.

3rd. The perineal operation is urged when the stone can be felt by rectum, instead of the transvesical operation.

DISCUSSION OF PAPER BY DR. SOUCHON.

DR. A. NELKEN, New Orleans: The excellent paper of Dr. Souchon should not be passed without some discussion. He has covered the subject so thoroughly that he has left very little to be added. I think the reason why we find so little in the literature with reference to the perineal operation is because that operation is rarely done. I must say, from my experience, I would not be inclined to go through the perineum to remove a stone low down in the ureter. The extraperitoneal method offers advantages which make it superior to the operation reported by Dr. Souchon, at least in the hands of a man who has not had the anatomical opportunities that Dr. Souchon has had. There is one method he omitted to mention for removing a stone low down in the ureter, and that is going through the bladder.

It may be caught with an alligator forceps and drawn into the bladder. If too large, the ureter ostium can be split and then sutured. In doing this operation it may be possible to immediately close the bladder and patient is saved a long convalescence.

Dr. Souchon referred to difficulty in suturing the ureter after removal of a stone. I do not believe the suturing is of great importance in these cases, provided we have removed the obstruction to the flow of urine, as the fistula will close of its own accord, even if we do not suture.

DR. F. W. PARHAM, New Orleans: This is a very interesting report. I know of nothing like it in the literature. Dr. Souchon has gone over the subject thoroughly and he has gone into the

literature. I am quite sure the only case resembling his is that of Fenwick. As he read his report, the chief objection to the operation, I should say, would be difficulty of suturing in cases where that would be required, owing to the size of the stone and the size of the wound, but, as Doctor Nelken has remarked, suturing is not necessary if you have drainage. I would not be in favor of sewing up the wound thoroughly, but providing for drainage.

DR. MARION SOUCHON, New Orleans (closing): I quite agree with what Dr. Nelken and Dr. Parham have said. Their criticism is good. I realize that there is no necessity for suturing the ureter, and that it might be a disadvantage to do so; but in doing this case, I wanted to do it perfectly, and, in order to do so, I followed what I considered a perfect technic. In fact, Fenwick did not drain in his case. This point was not brought out in the discussion, nor did I bring it out in my paper because the information only reached me last night through Dr. Hume. He told me of a third case Fenwick operated on. The patient was the same boy whom he had previously operated, who developed another attack six years later, but on the other side. A diagnosis was made or established that he had an impacted stone in the ureter at its entrance to the bladder. He cut down perineally but failed to get it out and had to go through the transinguinal region. My chief purpose in presenting this case was to put it on record and to do so through the Louisiana State Medical Society.

Nutrition in Infancy.*

By A. P. CRAIN, M. D., Shreveport, La.

There is no subject within the study of pediatrics that is of as much importance, and yet none so sadly neglected by the physician, as the proper feeding of an infant. At no time of life does prophylaxis give such results as in infancy, and no part of prophylaxis is worthy of more attention than the condition of nutrition. The idea is not wholly to tide the infant over the perils of the first year, but to so construct his frame and guard against impaired structure and deranged function of its organs in order that they may not be

* Read before Shreveport Medical Society.

a menace to him in after life. Since the largest part of infant mortality of the first year is traceable directly to disorders of nutrition, we should be extremely careful to guard against the immediate dangers of acute indigestion, diarrhea and marasmus, and later, the more serious cases of chronic indigestion, rickets and scurvy.

The sooner the physician realizes and gives this most important branch thorough consideration, and teaches it to the laity as much as possible, the less will be the mortality and the greatest success achieved in the treatment of infantile diseases. In practically all diseases of infancy the diet is of the more importance than a graduated dose of medicine. We, as a class, are too prone to allow a substitute food to take the place of the only ideal infants' food, the human breast, for the most insignificant causes. Often times a child's health is sacrificed with our permission by allowing a change to the bottle in order that the child's mother may enjoy the gaieties of society, or because it is too trying to nurse them through the summer months. Mothers' milk, since it is sterile, seems to possess that opsonic power, especially against the more common intestinal disorders, and, since it contains the proper elements in the proper proportions, it is a safeguard against scurvy and rickets.

Under no consideration should mothers' milk be substituted by the more inferior foods unless there are contraindications against the mother nursing her child, and some of these should first try to be corrected; for instance, if the milk is too rich, or too scanty, we should try to correct this through attention to the mother before trying other methods of feeding.

Every once in a while we are sampled with a new food for which some manufacturing concern claims special merit, and which in itself is a great temptation to try, and which gives temporary results, but so lacking in some of the essential constituents as to sooner or later predispose to rickets or scurvy. These proprietary foods serve very well to use in mixed feeding, when you may substitute for one feeding of the breast, but all authorities are agreed that they should be condemned as a permanent food.

Infant feeding is divided into, first, maternal; second, modified milk; third, mixed; fourth, artificial.

Of these four classes maternal and modified milk stand out par excellence. It is our duty to see that the children coming under

our care should be nursed by the mother unless she is suffering from some illness, or has disease of the breast or the milk is **not** of the proper proportions or consistency, or not enough secreted, and various other contradictions with which you are all familiar. If any of these complications do exist, we should select the **next** best milk to be had—viz., modified cow's milk—instead of a proprietary food.

The physician must know that artificial foods are not perfect substitutes for breast milk; that as a permanent food they are greatly inferior to properly modified cow's milk, and as often used by the laity, and even by the medical profession, they are capable of doing, and have done, much possible harm. Rickets and scurvy have so frequently followed their prolonged use, especially when given without the addition of fresh cow's milk, that there can be no escaping the conclusion that they were the active cause. There are times when some of these preparations may be of considerable value, but chiefly for temporary result in pathological conditions. It is much easier by proper feeding to prevent disturbances of digestion than to allay them in infancy. This complication often turns the scale against the patient. I do not hesitate to say that some very healthy and fine-looking children are raised on some of these foods, but as a whole they are to be condemned. Holt claims that nearly all of these children show some evidence of rickets, if properly examined.

If by any cause maternal feeding is impossible we should select modified cow's milk, which comes nearer equaling mother's milk in proportion and constituents than any other; it is easily made, and, if properly kept, and with proper precautions as to cleanliness of bottles and nipples, gives very good results. As to the process of modification, the various text-books gives good rules, but I have one which is rather original as far as working milk percentages are concerned.

According to Holt, you must let one quart of milk stand 24 hours, then siphon off the upper one-third, which is called 10 per cent. milk, and which contains the cream and most fat, and a part of which is to form your dilution or modification. Now, for a young infant, it is customary to make up enough of the milk for one day's feedin, taken as 20 oz. We would not give the baby the 10 per cent., because his stomach is too delicate to digest it,

so we must begin on a much weaker percentage, in order that the proteids will be less and gradually increase as the baby tolerates it; so begin on 1 per cent. or 2 per cent. and we would say, then, that we want 20 oz. daily quantity, of 2 per cent. strength. Now, in order to estimate how much water and milk to add together, we use the following rule which works out the strength of alcohol or any fluid strength: Required quantity times required per cent. divided by original per cent. Now, 10 per cent. or upper one-third is our original per cent., 20 oz. is our daily quantity, 2 per cent is the required percentage. Apply the rule and we have:

$$\frac{20 \times 2}{10} = \frac{40}{10} = 4 \text{ oz.}$$

The 4 oz. is then the part of the upper one-third we use.

Now, to supply the 7 per cent. milk sugar, 1 oz. added to the 20 oz. mixture will suffice, since the milk already contains some sugar. The formula will now read: Milk, 4 oz.; milk sugar, 1 oz.; boiled water, 15 oz.; total, of 20 oz. The value of this formula is that you can increase from 2 per cent. to $2\frac{1}{2}$ per cent., and so on, in a systematic way, until you have found out what is exactly best for the child.

Now, in every additional 5 oz. of mixture add $\frac{1}{4}$ oz. more of each ingredient—viz., 25 oz. of mixture will contain milk $4\frac{1}{4}$ oz., sugar $1\frac{1}{4}$ oz., water $19\frac{1}{2}$ oz. This makes a dilution of between three and four of water to one of milk. The formula is used the same way when you want to increase fats and proteids and you use 7 per cent. milk or upper one-half.

While a student at Tulane the subject of infant feeding impressed me very much, knowing as I do, that the average general practitioner gives it little scientific thought, owing to the complexity of the subject in all text-books on percentage feeding, and the country practitioner, having little time to devote to a subject which requires so much study. After graduating and locating in a city I knew that I would have time, as all young men do who locate in cities, to give the subject careful consideration. Being a member of the lecturing staff of our local sanitariums and Charity Hospital on the subject of pediatrics and visiting physician to the Charity Hospital, where I learned more than ever the necessity of proper feeding of an infant, stimulated me to thought and I began

using and am still using the formula given above, and will say that it is entirely satisfactory, practical and easy to understand.

In lecturing to the nurses on the subject of pediatrics I spend the larger part of the course on this all important subject of infant feeding, and if I stimulate one thought in regard to the betterment of the condition, I shall feel that I have at least accomplished something.

IN CONCLUSION: 1st. Always insist upon breast feeding as the safest and most reliable prophylaxis towards disease, and that babies who are breast fed resist disease better.

2nd. Modified cow's milk is the next best means we have at hand.

3rd. If you do use proprietary foods be sure to use fresh cow's milk with them.

4th. In the treatment of infantile disorders feeding is more important than a graduated dose of medicine.

Points on Epidemic Cerebro-Spinal Meningitis.

By E. M. DUPAQUIER, M. D., New Orleans.

The practitioner is the scout of the Board of Health. Always on the alert, a mixer, in his rounds he is the first one to discover things that should be reported to the headquarters of the health officials in view of public protection. But there are marks he must remember if he is to prove a good scout in order not to get lost in the brush. He is, also, a field worker in times of epidemic, and there are measures he must remember, too.

For the benefit of the practitioner the following essentials are presented, succinctly, clearly, gathered from recent literature among which a report on epidemics and prophylaxis of cerebro-spinal meningitis in the French Army (12th French Congress of Medicine, Lyon, October, 1911).

Remember, you cannot recognize endemic cerebro-spinal meningitis at a glance. No exact picture of the disease can be made to serve you as a guide, for there are so many clinical "possibilities." Suffice it to know that during an epidemic any disease with the

slightest nervous or cerebro-spinal symptoms may be looked upon as suspicious. There are, indeed, *walking cases* with slight stiffness in the muscles of the neck and back. Remember, however, there are other infectious diseases prevailing in winter, too, which may show cerebro-spinal symptoms; in particular, la grippe, bronchopneumonia, lobar pneumonia or otitis media. Any of these cases may be mistaken for endemic cerebro-spinal meningitis during an epidemic of the latter.

A certain diagnosis can be made in many, but not in all cases, by examination of cerebro-spinal fluid. The organism may be absent in the fluid and present only in nasal, pharyngeal, conjunctival secretions, expectoration and urine.

In the epidemics of the disease so far observed, it was not the rule that several members of a family were attacked. The disease seems to have no marked tendency to spread. The meningococcus is fragile. Only immediate contact can transmit it, and, then, there must be concurrent factors. Unhygienic and meteorologic conditions are necessary for its attack and hold.

Those who suffer from respiratory and pharyngeal conditions, at the time, are particularly exposed to infection, becoming effective meningococcus carriers, chiefly under the unhygienic influences that usually exist in human rookeries, where debilitated beings, from the infant to the old crone, become easy victims.

Precisely how the contagion is transferred and how the organism enters the meninges, no one knows.

Meningococcus carriers are said to spread the disease.

It certainly seems effective during epidemics, and after, as well, to make cultures from the nasopharyngeal and conjunctival secretions of healthy persons exposed in any manner around cases, and isolate those giving a positive report, submitting them to the following disinfection process:

FIRST. *Nose.* Inhalation with the following:

Iodin	12 grams
Guiacol	2 grams
Thymol acid	0.25 grams
Alcohol 60°	200 grams

SECOND. *Pharynx.* Applications with

Iodin	1 gram
Glycerin	30 grams

THIRD. Mouth. Wash and rinse with sterile water with 10 per cent. peroxide.

Observe secretions, again, and when two examinations at several days' intervals give a negative report, they are set free, as they are no longer carriers. Of course, this is practised in armies with disciplinary regulations, and could hardly be contemplated with the same results for private or civil practice. Nevertheless, it goes to show what that practise does for good.

Remember that, at least, simple disinfection of the mouth ought to be enforced, and, as simple as it is, it is sure to afford protection.

The Antimeningococcic serum, Flexner's in the United States, and Dopter's in France, are reported by users elsewhere to be really efficacious.

Limitations. The serum does not save all cases. But, when used in the first few days of illness, recovery without sequelæ is the rule.

Flexner and Jobling reported on 393 patients treated with Flexner's curative serum. Of these 295, or 75 per cent. recovered, and 98, or 25 per cent., died.

Dopter (*Annales de l'Institut Pasteur*) reported on 402 patients treated with Dopter's curative serum. Of these 66 died, giving a percentage mortality of 16.44.

These reports, confirmed by more recent ones, stand as an eloquent testimony to the efficacy of the serum.

Dangers. Caution must be exercised against *too large doses or too frequent injections of serum*. Large doses, in reports above, meant over 50 c. c. in 24 hours.

Too frequent injections of serum meant more than three times in 24 hours, or longer than three successive days.

Careful investigation of cerebro-spinal fluid should be undertaken—polynuclear and meningococcic cells made out *before resorting to further injections of serum*.

Death followed second injection of antimeningococcic serum as a result of anaphylaxis, and, also, when complicating tuberculous infection, the tuberculous meningitis cases being hypersensitive to repeated or second injections of horse serum.

Orleans Parish Medical Society Proceedings.

President, DR. B. A. LEDBETTER.

Secretary, DR. L. R. DeBUYS.

141 Elk Place, New Orleans.

In Charge of the Publication Committee, DR. L. R. DeBUYS, Chairman.

DR. HOMER DUPUY and DR. W. H. BLOCK.

INSTALLATION MEETING, JANUARY 8, 1912.

DR. B. A. LEDBETTER, Retiring President, read the following:

Annual Address of Retiring President.

NEW ORLEANS, January 8, 1912.

To the Officers and Members of the Orleans Parish Medical Society:

GENTLEMEN—It is once more my proud privilege to deliver an address before an assembly representing the most virile, the most progressive and the most scientific organization of the Southland. Words almost fail me to express my feelings on this occasion. When I was first elected President of this Society, I felt the exalted honor deeply and resolved to work heart and soul to merit the trust reposed in me; that my efforts accomplished some good was proved by the fact that you elected me for a second term, thus conferring upon me an honor which has been bestowed upon few men since the foundation of the Society. When, for the second time, you insisted that I should take the helm, I hesitated, lest the task should be too great for me to guide the ship safely into port; but a glance at the personnel of the men who were to co-operate with me in managing the affairs of the Society reassured me and I felt that, with their aid, I could combat any crisis which might confront us. There were tremendous obstacles in the way. It is true that our new domicile, one of the grandest monuments to the pluck and determination of a body of medical men to arrive at a long cherished ambition—a home of its own—was slowly rising from the debris of the old rookery which had long outlived the purposes to which strenuous efforts of past

administrations had dedicated it. It required continuous hard work—a campaign of unerring activity and aggressiveness; but, thanks to the energetic assistance given me by the members of this Society, the Board of Directors and the Chairman of the Domicile Committee, complete victory at last crowned our efforts, and before the last brick was cemented our domicile was completely paid for, and every cent of outstanding indebtedness covered by a fund of \$20,000 raised within our ranks in less than a year, as well as a fund of some \$1,400 raised by special assessment to furnish our new home.

So much for our new domicile; now for a brief resume of the other important events which made the year 1911 a remarkable one in the history of our society.

FINANCES.—When the administration which now surrenders the reins to its successors took charge of the affairs of the Society, although its predecessors had labored nobly to put the finances on a flourishing basis, we had just sufficient funds to run things very economically. The new board determined to better the situation. An active canvass for new members was begun, and from that date until the close of 1911, sixty new members had been added to the rolls, giving us a total membership of 312 at this date. Of course, new members meant additional revenues, and this increase, with retrenchments in incidental expenses, not only placed us on a sound financial basis, but enabled us to pay \$1,000 interest on the New Domicile Bonds during the year 1911.

SCIENTIFIC PROGRAM.—Thanks to our energetic and painstaking Chairman of the Committee on Scientific Essays, Dr. E. L. Leckert, and his able co-laborers, the scientific program for 1911 was the most interesting and instructive the Society has ever had. For details I refer you to the elaborate report submitted by Dr. Leckert, which you have heard to-night.

Our librarian, prior to the building of our present domicile, has repeatedly emphasized the necessity of increased shelving capacity for the needs of our growing library. These commodious quarters at last realize our ambition in that direction. We have ample and up-to-date shelving capacity. The library now can continue its growth untrammelled by want of space.

Now, that we have a fitting domicile, the all-important question will be to furnish the librarian and the Library Committee with

an adequate appropriation to continue this great work. That appropriation must be as large as we can within safe limits apply for that purpose. My successor in office and the new board will have in a particular manner this question of an adequate library appropriation as the vital feature of the coming administration. To continue this development and to make our library one of the greatest of its kind in the country, will demand an annual appropriation ranging between \$800 and \$1,000. I believe this can be done, and we must lend every effort towards its accomplishment.

With an indexed library, and with rules requiring that our books be removed from the shelves only by the Assistant Librarian, I desire to call your attention to the fact that he is not really the collector of dues in our Society, but that, owing to the forgetfulness and negligence of a relatively large number of our membership, he is called upon to spend a large part of his time collecting dues, which, if not paid, would by our laws immediately cause the members in arrears to be dropped from the roll. I would suggest to the new board the devising of some means to impress upon our members the importance of prompt payments, and thus allowing our efficient librarian more time to devote to the already onerous duties of his position.

Before closing this address I wish to specially commend the work done by the House Committee of which Dr. Seeman is chairman; the scientific Essays Committee, of which Dr. Leckert is chairman; the Judiciary Committee, of which Dr. J. P. O'Kelly is chairman. These most important committees attended to their functions with the zeal and promptness commensurate with the importance of their respective duties. A glance at their reports, which you have heard to-night, will demonstrate how arduously they have labored.

In conclusion, I desire to express my appreciation to Drs. Chas-saignac and Dyer, Editors of the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL, for the many courtesies shown the Society during the year which just closed; to Dr. J. Birney Guthrie, chairman of the Committee on Arrangement of the American Society of Tropical Medicine, for the donation of the balance left from the entertainment fund; and, finally, to our faithful and courteous Assistant Secretary, Mr. George Augustin, who for the past ten years has done more than his share to enhance the welfare of the Society.

DR. E. H. WALET, Incoming President, read the following

Address of Incoming President.

Gentlemen of the O. P. M. S.: It is indeed a distinguished honor and privilege to preside over the destinies and deliberations of an organization such as this—composed of the best and most progressive medical men of our beloved city.

I have enjoyed the opportunity of serving you in the several capacities of Secretary, Vice-President and as a member of your Board of Directors; but the honor conferred to-night brings to me the realization that I owe you a debt of gratitude, which I deem can be best expressed by pledging you my earnest efforts in the constant endeavor to advance the interests of the Society during the current year.

Each administration is confronted with its problems; but I feel quite assured that your new officers are ready to co-operate in the just solution of whatever difficulties may arise in the year 1912.

Much has been done during the term of office of my predecessor, for which we certainly feel grateful. He has displayed unremitting energy and zeal in the affairs of the Society, and the incoming administration finds itself well equipped for future work.

To the chairman of the Domicile Committee we owe also a debt of gratitude for invaluable services pertaining to the erection and equipment of our "new home."

As we have already experienced the genuine comforts of this new domicile—long ago dreamed of, but now a splendid realization in the entirety of its equipment—I earnestly trust that we will preserve undiminished interest in the work accomplished by meeting our obligations as they mature. I mean, gentlemen, plainly speaking, that we have what we need, and we should each and every one see to it that our membership includes every eligible physician in the Parish of Orleans; that each man should pay his dues fully and promptly to make it possible, first of all, to meet the semi-annual interest of \$500 accruing on our bonds, and then, to begin the redemption of these bonds.

Our library is splendidly equipped for the reception and preservation in proper form of books and various kinds of medical literature; hence, I must urge upon you the actual need of expending liberally towards a more complete set of modern medical works and periodicals.

Our librarian has demonstrated his ability and efficiency in the development of his department; but remember, my friends, that we should devise means to supply the growing needs of an up-to-date library.

It ought to be our purpose to foster the work inaugurated by this Society in its quarterly meetings at the Charity Hospital, where opportunity is afforded to demonstrate valuable work going on, and the exhibiting of cases that otherwise would escape our observation.

Proper interest maintained in the development of these clinical meetings will add much to our store of practical knowledge. The acquisition of our new lantern, just exhibited, will facilitate and ought to encourage the demonstration of much of the subject-matter presented by the essayists and discussed at our meetings.

Pathological specimens, slides, skiagraphs, pictures, etc., add materially to the proper grasp of the subject treated, and thus awaken a keener interest in the general practitioner as well as the various specialists. Not unlike many who have been practicing medicine for some time, I realize how vast and comprehensive the doctor's field of knowledge should be; and, gentlemen, I dare say, there is no better way to acquire versatility of medical facts than under the auspices of the Association, if each member will simply report from time to time interesting cases, or comment upon the results he has obtained from some special drug, prescription, or method of his own.

I realize, too, that the science of medicine is alert to-day; that medical men the world over are vieing with one another for the honor of solving the vexed problems that confront surgery, internal medicine and hygiene. New conquests are heralded every year in this wonderful march of progress, and, hence it is that we expect much from the prolific medical minds of this Southern metropolis.

We have within our confines a splendid medical department actively engaged in the dissemination of modern medical knowledge; in scientific research along medical lines, and it is from you, gentlemen, of the Tulane Medical Faculty, who are devoting your best energies to special studies, that we must expect such didactic lectures as will elucidate in our minds recent advances in anatomy, physiology and kindred branches.

The average practitioner has neither the time nor facility to keep abreast with the important advances unless presented to him in a concise, and, as it were, "predigested form" by a master of his branch of study. Hence, it is that we would urge the wisdom of securing through our Scientific Essays Committee a certain number of these post-graduate dissertations.

I think it should be our purpose, also, my friends, to invite occasionally and at some opportune time, a distinguished confrere of this country to address our Association on some topic of interest to all, thereby adding stimulus and new life to our meetings and encouraging a larger attendance of the members.

Conscious of my own desire to make this term prolific in achievements; conscious, also, of my total inability to succeed without the active, generous and willing co-operation, first of all, of the various committees, and, then, in a special manner of each member of this Society, I appeal to you, one and all, to lend us your good will and best support, that, working in a noble cause, we may find the O. P. M. S. ranking highest and best in our Southland.

Gentlemen, I express to you my warmest and most cordial thanks for the honor conferred upon me, and I wish you all a most happy and very prosperous New Year!

DR. J. M. GWINN, Superintendent of the Public Schools of New Orleans, the Annual Orator of the Society for 1912, delivered the following address:

Mental Waste.

My friend and former colleague in Tulane University spoke to you last year on the importance of being well born, and of the duty and responsibility of society to have the coming generations well born and in preventing the birth of those who would likely be useless or injurious to themselves and to society. Heredity is so powerful a force in the making of the citizen fit or unfit that none can doubt the desirability of having the new generation enter the world with the best heritage nature can give. I can quite agree with all rational ways and means which can be brought into use in improving the race or individual heredity. It is a

splendid thing to be well born. In view of the fact that three-fourths of every generation spring from the lower half of society, it is high time that something were done to protect the future of the race.

Leaving to eugenics the solution of the problem of race improvement, I wish to address myself to the practical and present problem of how to realize the greatest returns out of the capital which nature has bestowed, whether abounding in good or laden with mediocrity.

This is the day of conservation. Till now we have been exploiting our resources and wasting them in frightful extravagance or through ignorance utilizing but a small part of the total energy. The appalling waste in every field of human endeavor horrifies the layman in these fields when brought to his consciousness. Man and even nature seem prodigal in expenditures. Nature's processes seem carried on at enormous cost; it is said that for every life-producing germ, whether vegetable or animal, that comes to full fruition in adult life, millions perish.

The great Darwin is sponsor for the statement that if the eggs from a single female oyster all produced full grown oysters, and these in turn multiplied at the usual rate of egg laying, that in five years there would result a volume of oysters eight times the volume of the earth. The oyster is not the most prolific creature. In the plant world the waste of life is even greater, for of the billions of acorns that fall to earth, few grow into giant oaks. The sun sends out into space, and has for eons past, countless trillions of horse-powers of energy, with but a few tiny specks for planets to catch up the most infinitesimal part and convert it into use at enormous loss.

Man seems more wasteful even than nature, for his ruthless hand devastates the forests, and the loss of wealth and perils for the future generations through destruction of timbered areas have roused a nation into action and made a new political issue in governmental affairs. We proudly boast of our transcendental genius in inventions, and yet our steam engines utilize but a small per cent. of the energy of the coal. Now, we are finding out that billions of dollars worth of soil energy are annually wasted through faulty methods of agriculture, and that scientific and intelligent methods make two hundred bushels of corn grow on one acre where twenty grew before.

A favored theme with you doctors is the tremendous waste in life, labor and human happiness, due to preventable diseases. I read somewhere that, reduced to the dollar basis, this loss of life amounts to more than three billion dollars annually for the United States. You find your most powerful motives in research and discussion in the quest to find ways and means to check the waste now preventable and to find new ways with which to cope with unconquered human maladies.

In the spiritual and religious world the waste seems no less great, for broad is the way, and many there be that go down its course to be lost, while few are saved to walk in the straight and narrow path that leads to human redemption and salvation.

Looking on the magnitude of waste, it is a dark picture; and if it be but the fit that survive, the unfit stand out an unnumbered host of greatest magnitude.

It is but natural that each worker should be interested in the problems in his own field. The lumberman will talk of waste and conservation of forests; the farmer talks of the soil and crops; the engineer of waste of mechanical energy and inventions for greater utilization of the total energy; the doctor will be interested in waste of life and health, while I, who am a teacher, might naturally think of the waste of mind and methods of checking this most frightful loss of earth's most valuable asset.

While health and life are dear, indeed, and precious beyond degree, while field and forest and the mines of ore and precious stones and minerals should all yield up their full gifts to man and be preserved to the generations yet to be, I cannot hold that any or all of these can rightly claim consideration where mind is being weighed. For mere existence and buoyant health are meaningless except as necessary conditions for the development of mind. I, therefore, wish to present the thesis that the greatest waste that this world suffers is the waste of human mind, and that the greatest need is for the conservation and development of the mental resources of the race.

In the mental world we are but janitors living in the basements of our minds, while the stories above written in the original plans stand towering in the clear light untenanted. Most men do not think much, and those who do think have circuits of thoughts in lower levels. In knowledge most minds are barren wastes in com-

parison to the rich heritage of the race and in methods of operating sadly defective and out of gear.

Your physiologists tell us that the brain contains about eleven thousand million brain cells. Mental life is somehow dependent on the brain. Psychologists claim that mental action is made possible because the brain cells and the cells of the lower nervous system are connected in circuits. Education and all mental growth increases the number of connections and neutral circuits and make these pathways better highways for the transmission of nerve force. It is probably true that of this infinite number of brain cells and the possible millions of connections, that the average man has but a small per cent—one, two, or possibly five, developed and functioning; the great mass lies there waiting the call of a higher intelligence or functioning but little and on the lower planes. Here is the real waste in the world. When man has learned to utilize his vast heritage for mental life, then all the other problems of conservation and development will be solved.

When the great lawgiver of ancient days wrote, "So God created man in his own image, in the image of God created he him," and when the Psalmist, speaking of man, says, "For thou has created him a little lower than the angels," they could well have had in mind this god-like heritage of wealth of brain, which, fully developed, would raise man to his birthright, stationed just below yet fashioned like the Infinite and Supreme Mind of the universe. The thought expressed by these men of old finds full acceptance by most men of science to-day. While the language might be different the meaning remains unchanged. I remember with pleasure the fascinating address of the late William James, delivered before the National Society of Philosophy and Psychology in Columbus University a few years ago, in which he developed his theory of thought levels, and cited facts and made appeals to common experiences to show how men had risen and could rise to higher levels of efficiency in thought life. G. Stanley Hall, of Clark University, says, in substance, that we are but pigmies yet in our course toward mental evolution.

It may be that the problem of eliminating or lessening mental waste and the development of the vast dormant brain areas cannot be fully solved. I grant that this seems to be true. In your field of medicine there are many problems which you persistently pursue

which have for decades eluded you, and which to the layman may seem foolishness. But problems in whatever field are for solution, or at least for mental stimulation of those who attack them. We are given some mind that we may have more mind; so, with what magnitude of mind we have, whether small or great, we can preserve and multiply it only through efforts towards solving the problems confronting us.

I want to say that I have no specific for our mental ills, nor have I any new solution of the problem to offer, and but little if anything that is new in the way of fact to locate the problems and indicate some of the more immediate needs in clearing the way for more efficient endeavor. As one who finds pleasure in psychological studies, and as a practical school man, I have met up with some facts and gathered from others some information which I thought you might be interested to hear, and which I wish to present to you, for it is through your assistance and that of your profession that the solution of many of the problems in mental waste and development will be materially aided. For, whether we take the crass materialistic point of view, that mind is a phenomenon of matter and developed from below, or the spiritual point of view, that it is a spark of the divine mind descended from above, to become incarnate, we must all acknowledge its close relationship to matter, and the facts that health, nutrition, rest and exercise play leading roles in fashioning the mind. Any program for lessening mental waste and for developing the latent possibilities for a higher mental life, must include the medical profession in a leading role.

The school is the institution which society has created and established for the purpose of developing, training and conserving mind. Unless society has made an egregious blunder and produced an institution which fails absolutely to perform the functions for which it was created, then mental waste and lack of development of natural mental resources result when the school has not for its pupils those for whom society prepared it. It is just here that society suffers a tremendous loss, for, while it has prepared an institution to have direction of mental development of the child and youth from 4 or 6 years of age to 18 or possibly 24, hardly one out of a thousand finds his way through the university. If a university education were necessary for all, then the loss would

be more than 99 per cent. The college receives but a small per cent., and only about one out of a hundred complete a college course. The mortality in the elementary and high school is lamentably great, for here the loss is 90 per cent., for only one in ten ever complete a high school course. About half the population of the United States stay in school only through the fourth grade—just long enough to learn how to read and write and to do the simple processes in arithmetic. No manufacturing establishment could possibly be maintained where the loss is so great as is found in our schools due to non-attendance of those for whom the schools were established. I do not hold that every one should be a university graduate; but I am certain that I am extremely conservative in saying that from a fourth to a half of the mind of the nation is eternally lost due to the fact that pupils quit school long before the school has done for them what it could do for those of their natural endowments. A partial remedy may be secured through more stringent child labor laws and compulsory school attendance laws. I favor the extension of our compulsory attendance to include the eight elementary grades for those under fourteen years of age.

Sometimes, when I reflect on the many shortcomings of our educational system, I am persuaded that society has made many mistakes in making the school just the kind of institution it is. I am quite certain that if progress moves at its present rate, that in a century or two much of our educational machinery will be discarded and maybe ridiculed. The school is just now being made over into a more vital institution, but much needs yet be done before we can hope to make it a real mind developer and trainer for the many varying types of human minds and meet the diverse needs of the members of a tremendously complex society. Great mental waste is due to the fact that our schools are not truly educative institutions. While legal enactment will help and a vitalized and socialized school will greatly assist, there remains much to do in creating a real desire on the part of many parents for an education of the higher sort for their children.

According to the last report of the Commissioner of Education, the last census shows that there were 24,239,820 children from 5 to 18 years of age in the United States, and that 17,506,175, or 72.22 per cent., were enrolled in school. Of those enrolled, 72.5

per cent. were in attendance every day during the school term, which averaged 155.3 days in length. These figures show that for every child of school age there was an average attendance of but 81.3 days. The loss due to non-attendance of those of school age reaches the enormous figure of 48 per cent. For Louisiana the average length of school term was 130 days, while on an average each child of school age attended school but 42.4 days. The loss in this State reaches 70 per cent. For New Orleans the enrollment of those of school age is approximately 70 per cent., and in the public day school the average days attendance for those enrolled was 135 days.

Apart from the loss due to the fact that 28 out of every hundred children of school age do not attend a single day, and that 27 out of every hundred enrolled are absent each day, great loss arises from slow progress of the pupils attending school. After making a careful study of the rate of progress in more than sixty of the largest cities in the United States, Dr. Leonard Ayers of the Russell Sage Foundation of New York says: "The average pupil cannot complete the work of the eight grades in eight years. So far as can be ascertained, in no city does the average child regularly succeed in doing each year's work in one year. The average child in the average city school system progresses through the grades at a rate of eight grades in ten years." A natural result of this slow progress is to make the child over aged for his grade. Leaving out of consideration all the rural and village schools in this country, more than a third of the children in our schools are over aged. Slow progress and becoming over aged cause many pupils to drop out of school.

In this connection I wish to submit some facts concerning the schools of this city, which I collected last year and published in my recent annual report. In the white elementary schools 23 per cent. of the children enrolled are in the first grade, 18 per cent. in the second, while but 3.6 per cent. are in the eighth, and 5.2 per cent. in the seventh. Approximately 75 per cent. of the children are in the lower four grades, while 25 per cent. are in the upper four grades. In comparison with the averages for 386 cities in the United States, our eighth grade has but 64 per cent. of the average enrollment for that grade, and the seventh but 70 per cent., while our first grade has 111 per cent. of the normal propor-

tion for that grade. Without burdening you with the details of how the study was made, or with the full report on the various tables worked out, I found that 49 per cent. of the children were one or more years above the normal age for their grades, and that 382 children are more than three years above the average for their grades. The per cent. of over aged pupils is greatest in the fifth grade, where it reached 64.2 per cent; it then decreased to 48.6 per cent. in the eighth grade.

Thirty-five per cent. of the children have taken one or more years above the normal time to reach their present station, 51.2 per cent. are making normal progress, and 13.4 per cent. are making rapid progress. Here, again, the fifth grade is the one that makes the poorest showing, the per cent. of slow pupils being 43.2. Above this grade the proportion of slow pupils greatly diminishes, being but 14.8 in the eighth grade, while the per cent. of pupils moving at above normal speed rises to 38.3. This shows conclusively that the slow-going pupils quit school soon after completing the fifth grade, and that our seventh and eighth grade pupils are a selected lot of pupils of above average school ability.

Of the 4,184 children in the first grade, 3,156 have been in this grade one year, 885 have spent two years in this grade, 118 three years, 17 four years, and 8 have remained in this grade five years. In all we find about 155 children who have spent more than three years above the normal time to reach their present grades. It is generally conceded that a child that needs three or more years above the normal time is of the type that needs special treatment and should be removed from the school and sent to a special school or class. My study and observation convinces me that New Orleans needs some special schools or classes or institution to care for these unfortunates, and, at the same time, greatly add to the efficiency of our regular school, and by releasing the teachers from the great expenditure of time and energy now required through the presence of these abnormal children in school.

All investigations of the great loss due to slow progress and dropping out of school lead into the field of health and hygiene. It is just here that your profession has rendered valuable aid. While physical defects that could be remedied, and loss of time and school efficiency due to preventable diseases are not the only, or even the chief, causes of retardation and elimination, yet they

do cause a loss which accounts for a large per cent. of the failures in the struggle of life. A New York investigation found that children suffering from physical defects makes 8.8 per cent. less progress than do children having no defects. Enlarged glands and adenoids cause the greatest retardation, while defective breathing and teeth are somewhat less serious in their influence. Dr. Ayres says that the child with the defective teeth takes one half year more than the one with good teeth, and the child with adenoids more than a year longer than the child without adenoids to complete the elementary grades.

At one time the mind and the body were set over against each other; they were the poles in opposition, and yet far apart. Recently man in his thinking in harmony with the movements in other fields of thought has brought them together and found them in co-operation rather than in conflict. Some go so far as to speak of them as one, as mind-body. All recognize the fact that whatever wastes the body and health wastes the resources of the mind.

For the past years this city has had a system of medical inspection in its public schools. At present there are three men devoting a part of their time to the work. It will be readily apparent to you who know the amount of time and labor required to make inspections and work out results, that with so small a force but the most pressing problems in the field of health and hygiene can be given any attention. So far as examination of children is involved, we have been forced to confine our attention to those who are reported as backward. Last session Dr. Moss and his assistants examined 2,339 children of the primary and grammar grades reported from twenty schools as backward. They reported that 71.92 per cent. of the boys and 74.5 per cent. of the girls examined had one or more physical defects. The defects were distributed as follows: Per cent. of boys with defective teeth, 38.2; enlarged glands, 34.8; defective vision, 14.8; hypertrophied tonsils, 12.3; defective breathing, 12.1; adenoids, 5.9; defective hearing, 1.68; all other defects, 7.3. For the girls the report shows as follows: Defective teeth, 34.7; enlarged glands, 30.2; defective vision, 27.2; hyperthophied tonsils, 14.5; defective breathing, 8.7; adenoids, 4.8; defective hearing, 1.9; all other defects, 4.8.

The medical inspector says: "I have noticed with much satis-

faction the increasing number of pupils whose parents are voluntarily having them examined and treated, showing the gradual awakening of the public to the dangers of neglected physical defects in the child." Last year 52.48 per cent. of children of parents receiving notice of defects consulted physicians. In order to increase this per cent. the department needs the assistance of a nurse, who could be of great service to many securing treatment at the various hospitals in the city. Medical inspection and exclusion of pupils with symptoms of quarantinable diseases have saved thousands of days to the children in school attendance.

A great deal of mental waste is due to the fact that when the mind acts it acts with but a small per cent. of its maximum efficiency, due to the influence of environmental conditions which could be improved.

We may think of the mind as a great reservoir of power, which acts with maximum efficiency when all its force is concentrated on one point—the mental task of the moment. If when mental work is to be done there are a hundred, or even ten, distracting environmental elements, these each open, as it were, a floodgate to lead the power of mind into useless fields, and so decrease that available for the work in hand. The noise of the street, the pain of hunger, or indigestion, or pain in head on the morning after, the cramp of chair or desk or posture, the lessened circulation due to lack of adequate supply of fresh air, the blurred page due to poor paper or print, or light supply, improper temperature, unsatisfactory instruments of labor, the "call of the wild" to easier levels of thought, all consume the power of mind and make the task in hand hard work; so hard, in deed, that most men slip into lines of little resistance and live their lives on low levels of thought or deal in second or third hand ideas, borrowed or stolen from braver men. Some one has said that thinking is hard work and most men avoid it.

Dirt is a great destroyer of mental power. The mental power of any people varies directly with the amount of soap and water used. A recent pamphlet says: "A machine whose head, throat, jaws, tongue, lips, teeth, joints, tubes and ducts are stopped up or clogged with dirt, not only wears out more quickly than the clean machine, but its earning capacity is less, because it cannot be run up to speed." Constant repairs to a dirty machine by expensive

toolmakers (you doctors), the time spent in the repair shop, renders the earning capacity nil, because more money is spent on it than it earns. Dirt produces friction, and friction causes waste. It is a well known fact that a well-groomed horse will not only look better but will actually do more work than one not groomed. In England they say: "A grooming is as good as feed for a horse." Dirt in the pores and ducts cause stoppage, irritation and inflammation, resulting in mental and physical sluggishness. Uncleanliness aggravates inborn defects, and the child who is already handicapped at birth is robbed of any chance for an effective life. The relation between dirt and mental inefficiency is a theme in itself for a course of lectures, rather than for a paragraph. Much of the mind of the world is lost in the dirt-heap. The savage is probably savage because he is unwashed, rather than unwashed because he is a savage. The body should be clean externally and internally so the mind may have a fair chance to work. I wish we could have a gymnasium with swimming pool and bath facilities and an outdoor playground equipped with gymnastic apparatus for every school. Public baths and playgrounds should be encouraged not only as aids to health and happy living, but as a means to higher mental life. The Behrman Gymnasium and our department of physical education are doubtless contributing as much toward mental and moral upward growth as some of the so-called standard subjects in our curriculum.

There is a wise saying that one should think before he acts. This is good advice and should be followed by all who are called on to perform new acts, but in the history of mental evolution man acted and thought about it afterward. Thinking was developed long after acts were performed. Genetically thinking is the result of action and not a cause of it. Man had to perform physical acts in order to make the development of mental life possible. This priority of action to thought is registered in the nervous system of every new-born babe. The neural circuits for many movements are complete at birth, or perfect themselves unassisted. It is utterly impossible for the mind of the infant to perform many mental functions, but the babe can kick and cry and move arms and back and body. Letting the neural circuits function which control these actions carries a blood supply to the brain and so supplies the higher brain centers with nutrition through which they

perfect the circuits for mental action on higher levels. It is here that the direct correlation between high intelligence and muscular control is partially explained. In all schools for delinquent and deficient children there is included much of physical exercise and manual industrial work. Activity in this work wakes up the high centers. If manual industrial work is good for those of lower intelligence, it is found equally good for those of higher grades. This is not the only, nor even the chief, reason for the introduction of household arts and sciences and manual training into our schools, yet it is sufficient to justify its introduction.

An inadequate supply of proper food results in lowering the efficiency of the mind. In New York York and in other cities lunches are served by the school authorities to ill-nourished children in order to fit them for school work. There is little doubt that improper breakfasts and lunches greatly decrease the efficiency of the work of many pupils. Mothers need education in the matter of daily meals suitable for school children. Over-feeding may be equally as bad as being under-nourished, and is more common among adults. I have not the time to dwell here, but much of the waste of the mind of the world is due to the influence of improperly nourished bodies. Who can tell but that the influence of teaching cooking in our schools may lift the level of mental life a point or two?

One of the essentials in the location of a site for a school is quietness. The building should not be on a business street or near noisy factories. There is a great deal of unnecessary noise in cities, and societies for the suppressing of unnecessary noise are not infrequently found. There are a number of our school buildings where the work of the pupils and teachers is greatly hampered by noise from the street, the worst cases being that of McDonogh No. 13 on Rampart and Girod streets, and the Boys' High School, Callopie and St. Charles. A noiseless pavement should be required by city ordinance upon all streets adjacent to school buildings. In some cities quiet zones are being established about schools, libraries and hospitals. Save the mind through lessening the din of street and factory.

In schools, and business as well, mental fatigue prevents the mind from functioning efficiently. The causes of mental fatigue are in common with nearly all other causes of mental waste, mental

fatigue being but the last term in the operation of other forces in producing waste. A discussion of mental fatigue could but repeat much that would be said under specific topic; I therefore give but brief consideration to this phase of my theme.

The relation between physical fatigue and mental fatigue is still but vaguely understood. In the main, there seems a direct cor-relationship, but in some instances exceptions appear. It is generally true that, whatever lessens physical fatigue, will favorably influence mental efficiency.

Physical fatigue seems to be due to two causes—viz., the presence of toxins thrown off as waste, and through exercise and the actual loss of tissue due to exercise. Ranke, Mosso and others have demonstrated that in consequence of physical activity there are found in the muscles certain substances, particularly lactic acid and acid potassium phosphate. These are poisons, and, if injected into a fresh muscle, the fresh muscle, without having done any work itself, at once suffers loss of its contractibility and capacity to do work. W. Weichardt believes that he has found that the body forms an antitoxin against the fatigue toxin. If this be true, it takes but a modest flight of fancy to enable us to have a bottle of antitoxin which, when hyperdermically injected, will neutralize the toxic acids, and this cause of fatigue will be conquered, and sleeping hours may be reduced by half and working hours be multiplied. Our quest would then be for some food which would be instantaneously digested and assimilated. Chemistry and cooking are making progress in this direction.

The great migration toward fresh air and outdoor working and sleeping is characteristic of the present. Bad air in the school-room or office is a primary cause of fatigue. Theory and practice are frequently divorced here, for, while all advote a plentiful supply of fresh air, many keep doors and windows shut, and even make fast the blinds. Our experiment with the open-air school has been most satisfactory in production of better school work and fewer headaches. The mild climate of New Orleans requires a distinctive class of architecture for homes and schools. In our school buildings we are making toward a better local type. The myth of the "night air" does not prevent numbers of people in this city from sleeping outdoors, and the future will see much of school work done in the open air.

The movement toward the devil is nearly all made during man's non-working hours. We know better how to work than we do how to spend our leisure. Hours of labor are essentially shortening, and the demand for vocational and practical education continually increasing. Make education fit for life is the cry of all, and many of these straightway forget that every day of life has twenty-four hours. They seem to think that life refers to vocation—to the working hours alone. Education, to fit for life, must provide for the non-vocational hours as well as for the vocational hours. I suppose your profession is of the opinion that man needs to be taught how to sleep—perhaps with his mouth closed, silently and in the fresh air. Music, art, games and sports, literature, history and philosophy will always be needed to help man to acquire proper ways of spending his leisure hours, to the end that these hours may be enjoyed and the working hours made more effective. In some trades the workmen are much less efficient on Monday than on other days, for the reason that they do not know how to spend Sunday. The mental resources of the race are sapped through ill-spent non-working hours. Let the school teach man how to amuse and entertain himself, and how to recreate himself in his hours of leisure, and a great step will be made toward conservation of our physical heritage.

Every step by which the race has lifted itself from the low level of instinctive action to its present station in thought-life has been one of pain and toil; every advance has been purchased at frightful expenditures of energy and enormous sacrifice of immediate pleasures. Newly-established lines of higher mental life, and the pull of lofty ideals, hold us but unstably in our stations. The strong instinctive and lower forces ever strive to drag man from his lofty place and confine him, like Callaban, in the dungeon in the basement of his mind. The "call of the wild" is strong, and the line of least resistance leads toward lower levels of thought and action. Everything possible should be done by the school and by society at large to remove from man's environment the stimuli which stir up these lower forces and rouse them into action. The lines of church architecture lead upward in pointed windows, high-gabled roof and lofty spires. These suggestive lines form, as it were, conductors to lead man's thoughts heavenward. The home, school, library and all places of amusement should have the noblest

works of art upon their walls and only the best literature on shelves or tables. Much of so-called news should never find its way into print, and the comic supplement sadly needs inspiration from higher levels for its wit and humor. Money spent in beautifying parks and avenues and public squares will bring in rich returns in the thought-life of a people. St. Paul was at once a psychologist, philosopher and a social reformer when he wrote: "Whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report, if there be any virtue, and if there be any praise, think on these things."

While your work as physicians seems dominantly to concern itself with the body, with physical life and health and strength, and mine, that of my profession with the mind and its development, we have found out that our fields of labor overlap, and that we are co-workers seeking, as Plato says, to give to the mind and the body all the beauty and all the development of which they are capable. It is through this better understanding of each other's work and through this co-operation that the mental resources of the race are to be conserved and brought to greater fruitfulness.

THE SOUTHERN SECTION OF THE AMERICAN LARYNGOLOGICAL, RHINOLOGICAL AND OTOLOGICAL SOCIETY met in the rooms of the Orleans Parish Medical Society on February 16 and 17. Sessions were held on both days, and a number of interesting papers were read, including those by Drs. Hudson McKuen, of Philadelphia; J. A. Stuckey, Lexington, Ky.; Dr. Freudenthal, of New York; and Drs. W. L. Ballenger and G. F. Ingalls, of Chicago. A variety of entertainment was provided, including a party at the French Opera on the last night of the meeting.

Communication.

EDITORS NEW ORLEANS MEDICAL AND SURGICAL JOURNAL:

Please be good enough to publish this suggestion in your March number. I propose an organization to be known as "The Louisiana State Coroners' Association," and ask all the re-elected or newly-elected coroners in Louisiana to arrange to be in New Orleans on April 23 (the first day of the L. S. M. S. meeting), so that we may "get together" right after the adjournment of the morning session, unless otherwise agreed upon. The objects of such an organization would be manifest, but the special need of such an association would be to get the united efforts of ourselves and the co-operation of our District Attorneys towards combatting the present disgraceful conditions existing in our midst in the matter of criminal malpractice, both by illegal practitioners and by "acute and chronic abortionists." The scheme of the eligibility to membership of non-coroners, the *modus operandi*, etc., are things to be worked out later.

All will agree with me that something ought to be done along this line; these evils are universal, and it strikes me that the only way to do anything towards remedying them is for the coroner to step in when a victim dies; then, with the co-operation of his fellow-practitioners and the officers of the law, if successful prosecutions do not follow, this procedure will at least have the moral effect of causing the offenders to desist.

Please invite expressions from others on this subject in your April number. Thanking you for the space, I am, yours fraternally,

ARTHUR A. HEROLD,

Coroner-Nominee, Caddo Parish.

Shreveport, La., February 13, 1912.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

The Visiting Staff and the New Orleans Charity Hospital.

The anomalous relation of the visiting physicians and surgeons in their positions in connection with the Charity Hospital has for a number of years created a degree of dissatisfaction which has found expression in various ways.

The Alumni of the Charity Hospital have more than once memorialized the Charity Hospital Board of Administrators with recommendations for the improvement of the institution, and the Visiting Staff for nearly four years has had a quasi organization which has tried in a number of ways to attract the notice of the Board to existing evils in the medical management of the institution. In spite of everything, the archaic disposition of the affairs remains, and, at each open effort of the Visiting Staff, an attitude of either antagonism or of indifference has emanated from within the Board itself.

As a sop to the Visiting Staff, the Board proposed that a Conference Committee be created to work with the Board in improving hospital conditions; afterwards, the Board concluded that this was unwise or undesirable, and has failed in every way to recognize the committee from the Visiting Staff, which was brought into being on the initiative of said Board.

For a full period of twice seven years the Visiting Staff has served the hospital in a constant hope that the dignity of such a body should some day be recognized, but as yet such a hope has been forlorn.

It seems indeed anachronous that the men who for years rendered service to the poor, and incidentally to the glory of the Board of Administrators, should be denied even the privileges of the hospital, which they, more than any others, have maintained.

The comparison of the Charity Hospital with any other similar institution of the same importance and size will show in a moment

the peculiar arrangement through which a body of junior men, recent graduates, should have paramount authority and actually over and above the very men who have made their knowledge of medicine and surgery sufficient to permit their serving in any capacity as interns in a hospital.

The rules in force at the Charity Hospital to-day entirely invalidate the services of the Visiting Staff by denying the control or attention, so far as patients are concerned, after the noon hour, when arbitrarily the functions of the hospital come under the sole direction of the House Staff of three graduates and a group of undergraduate students.

It must require small argument to persuade an interested public that this is wrong, and that the patient is bound to suffer in changing physicians twice a day—every day. Moreover, the responsibility so divided leaves the burden on no one, and the result is often apt to be disastrous to the patient, even if such actual instances do not occur.

We have no mind to indulge in incriminations, but, as the organ of expression of so many medical men interested in the development of the proper efficiency of an institution which has the basis of greatness, we owe it to ourselves as well as to our contingents to voice some protest against existing conditions which grow worse instead of growing better under each new administration.

The Visiting Staff of the Charity Hospital should direct the medical and surgical management of that institution, and this should be done through a systematic organization of the Visiting Staff working directly with the Board of Administrators, which should have little to do with the medical and surgical affairs, excepting so far as the fiscal and domestic sides are concerned.

The present organization of the Charity Hospital is in no ways modern or complete, in spite of the self-appreciation of the constituted authorities who overlook much that goes to make a hospital in their vision of the economics of the hospital alone.

There is perhaps no institution in North America which is as excellently administered in the domestic side by the noble Sisters of Charity, who have always aided the Board of Administrators in purveying the best to be had at the minimum of cost, and in this side of the hospital affairs we must have no concern, and we must, perforce, express none but the most cordial commendation. With

the medical side, however, we have to do, and, as representing a large body of citizens of the State serving the hospital, we believe that we may have the right to the last word.

The conditions at the Charity Hospital must change; they must change so that the relation of the Visiting Staff shall rest on a modern plane of usefulness and authority. Otherwise the much-exploited Charity Hospital of New Orleans will receive from abroad the proper criticism for the archaic methods of medical organization.

The Visiting Staff has, also, some rights in the matter, earned by their predecessors and by themselves. The patients, too, have the right to enjoy the best service the city can and may afford in a Visiting Staff made up of men distinguished at home and abroad, and many of whom, outside of the Charity Hospital and of the minds of the present Board of Administrators, are dignified by the respect and recognition of authority which years of reputation have carried.

At present the patients of the Charity Hospital are denied the services of these men, who, under existing rules, perform perfunctory, though well-intentioned services at the hospital, and which service may be discounted after twelve o'clock each day by the authority of any member of the House Staff, often including the undergraduate intern.

It is desirable that the Board be awakened to the facts which we have tried to state, and which seem to be known to all medical men who are interested in the proper standard of efficiency of the hospital.

The Importance of Tuberculosis.

Leaving out of consideration the vast amount of physical and mental suffering, the enormous sum of disability and invalidism due directly to tuberculosis, the most recent figures relating to mortality statistics demonstrate the appalling importance of the scourge as a cause of death in this country.

These figures are taken from Bulletin 109 on mortality statistics for 1910, issued by Census Director Durand and prepared under the supervision of Dr. Wilbur, Chief Statistician, and relate to the Census Bureau's death registration area, including over 58 per cent of the total for Continental United States.

Tuberculosis is shown to have caused the largest proportion of

deaths from any one cause at all ages from ten to fifty, or the most active and useful periods of our existence. The percentage ranged all the way from 18 between forty and fifty years of age to as high as 35 between twenty and thirty years. If we extend our calculations so as to include the mortality up to the age of sixty, even, we find that nearly one-fourth of all persons dying during the period from ten to sixty years of age were carried off by tuberculosis. It must not be forgotten that, while tuberculosis may at times be overlooked as a cause of death, it is not at all likely that any death ever will mistakenly be ascribed to this disease.

Tuberculosis being a communicable and preventable disease, the above facts constitute a sad commentary upon our intelligence as a people and upon our much-vaunted business and practical sense.

Surely, if the inhabitants of the United States as a whole could be made to realize the full significance of the figures quoted above, they would take a more active interest in the crusade against the white plague. It is the solemn duty of the medical profession to do its utmost to make the people fulfill theirs in this matter.

The Louisiana Anti-Tuberculosis League, whose efforts have so far been mostly confined to New Orleans, is doing good work towards prevention as well as the relief of many at its outdoor clinic, and the cure of some at its camp in St. Tammany, but it is hampered by the lack of funds. It should have as many thousand members as it now has hundreds, when even the nominal annual dues of one dollar would be an important item. More physicians should join the League, and through them a large membership should be secured.

Already our local statistics show that the total number of deaths during 1910 is less than in the preceding year to about the same extent as the deaths from tuberculosis; in other words, that we have had fewer deaths because we have diminished our deaths from tuberculosis. While it would be unfair to claim the improvement as a result of the League's labors, it would be equally unjust not to credit some of it to the League's propaganda.

It may be argued that to the State should be left the task, through its Board of Health, its hospitals, the establishment of sanatoria, etc. Very true, but until the State is ready to do its full duty the League should be encouraged and assisted, as it is at present the chief organized agency working in this line, and it can always remain at least a useful auxiliary.

Abstracts, Extracts and Miscellany.

Department of Therapeutics and Pharmacology.

In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

SOME DON'TS IN VACCIN THERAPY.—Alderson gives us in the *California State Journal of Medicine* for September, 1911, some "don'ts" as to vaccin therapy. He says that from time to time one hears the "vaccin" treatment of certain skin diseases adversely criticized by physicians who have been disappointed with their results. During the past six years the writer frequently has seen patients who previously had been given vaccins by their physicians in an empirical manner, with the inevitable bad result and the consequent discrediting of the method. It is to those who have been disappointed with their results that the following "don'ts" are respectfully dedicated in the hope that their due observance may be the means of preventing some future failures. The writer bases the following experience and success with the method and reports from other practitioners:

Do not expect to see good results unless vaccins are used in accordance with certain established rules—only disappointment can result from empiricism.

Do not use vaccins to the exclusion of all other methods.

Do not use an emulsion over three months old.

Do not use a monovalent stock vaccin if a polyvalent preparation can be obtained, and do not use either if an autogenous vaccin is available.

Do not overwhelm the patient at first with too large doses, and do not increase the dosage too rapidly.

Do not inject too often—this is a common error, which is responsible for many disappointments.

Do not inject vaccins in the treatment of the averages case of acne, furunculosis or staphylococcia more often than once in seven or ten days. Be guided by the clinical signs.

Do not forget that during the two or three days immediately following a proper injection the negative phase is present, and that during this phase lesions should not be manipulated or in-

terfered with in any way. Usually after the fourth day (if the dosage has been excessive) the positive phase begins to develop, and then local treatment can be carried on advantageously.

Do not forget that much manipulating of the lesions can have an effect similar to an injection, and in that way can complicate the negative phase.

Do not fail to observe that a marked increase in lesions during the first two or three days following an injection is evidence that too large a dose has been injected or the lesions themselves have been interfered with, or both.

Do not repeat the injection for some time if the negative phase (as shown by objective signs) persist—and then, when the injections are again resumed, proceed cautiously with small doses.

Do not use the same region for repeated injections—change the site often.

Do not condemn the method if your results do not equal your expectations, but carefully determine whether or not you have carried it out properly, and you will probably find some error in your technic.—J. A. S.

QUININ HYPODERMICALLY.—F. A. Smith, in the *Indian Medical Gazette* for September, 1911, makes the following statement as to this use of quinin:

Since 1899 I have treated all except dispensary out-patients, suffering from acute malarial fever, by the hypodermic injection of quinin, and, in addition, during the last five years, in order to prevent a possible recurrence of malignant tertian or any fresh infection, I have given a hypodermic injection to every patient who has been anesthetized, just before he comes round, and one or two consecutive days to all in-patients suffering from acute diseases, such as pneumonia, typhoid fever, smallpox, etc. In the twelve months from October, 1909, when I was civil surgeon at Quetta, the number of injections given must have been between three and five thousand. In Baluchistan a malignant malaria, with acute gastric symptoms is prevalent, which may be counted upon to recur at inopportune moments. Here, on account of expense, the solution of quinin bihydrochloride was more often used than the hydrobromate. In no case did tetanus result nor inflammation of any sort.

The method of sterilization used is as follows: For each injection a glass syringe, a needle, a nail brush, and two or three

swabs are placed on a piece of lint and boiled from five to ten minutes; the lint is then wrapped over the instruments, and all are placed in a sterilized towel. If a solution of quinin is being used, that is boiled; if the tablets, a teaspoon is sterilized. At the bedside a small area of the patient's arm is well scrubbed with the brush and soap, then rubbed with some force with one of the swabs soaked in 1-in-20 carbolic acid, and another swab is placed on the prepared spot. A tablet is then placed in the sterilized spoon, ten or fifteen minims of water is poured over it, the whole is boiled over a spirit lamp, and the tablet broken up with the point of the needle. The solution is then drawn up into the syringe, and this is placed in carbolic solution until it is quite cool and then injected, the needle being at the same time gradually withdrawn, so that the fluid is distributed along its track and does not tear up room for itself in one spot. The solution in cooling becomes opaque, but this does not interfere with its efficacy. When I first used these tablets 12 years ago, in one or two cases pain and a slough resulted; this was in no way due to the quinin, but to my anxiety to make the injection before the solution became opaque, and was caused by the heat of the water. No such contretemps have occurred since.

The site of injection is afterwards gently massaged with a swab. Occasionally there is a slight pain for perhaps a day, but this is the exception.

In the majority of cases of malaria two injections at an interval of 24 hours are sufficient to bring the temperature to normal, or in case of other diseases to eliminate malaria.

At each injection I never give more than 2 grains of quinin, in not more than 20 minims of water. The use of larger doses is to be deprecated, as the smaller amount produces the full pharmacological action of the drug.—*The Therapeutic Gazette*. J. A. S.

[We cannot help thinking that this dose is very small for the purpose.]

GASTRIC ULCER.—Herrick (*Cleveland Med. Jour.*, Aug., 1911) concludes a theoretical and clinical study of this subject as follows: By our present method we are unable to diagnose cancer of the stomach in the operable stage. Ulcer of several years' standing in a patient 38 years of age should receive surgical treatment. Ulcer of short duration, provided no pyloric obstruction exists, may

be given a short medical course of not more than four weeks' duration. If symptoms recur, or are not entirely relieved, surgical treatment should be advised. Pyloric obstruction is always an indication for immediate operation.

Complete eradication of diseased tissue, either by excision of the ulcer or resection of the pylorus is the aim of surgical treatment.—J. A. S.

PARASITE OF CANCER.—Butlin reviews his previous papers on this subject in which he likens the cancer cell to a protozoan. He says there is no one cell for every kind of malignant disease, nor is there one cell for the carcinomata and another for the sarcomata. Every variety of malignant tumor has its own typical cell, and the characters, the selection of locality, and relations of each variety of cancer cell to the host are sharply defined and differ as widely as, though not more widely than, those of the varieties of protozoa which belong to the same species. He cites examples to illustrate some of the resemblances of the life history of the cancer cell to that of the parasitic protozoa. It seems that they are as careful in the selection of locality as are the varieties of parasitic protozoa. They spread in the interstices of the tissues in which they first appear, as do certain of the protozoa. They are conveyed in the blood and lymph, as the parasitic protozoa are. They are deposited in distinct tissues and organs like the parasitic protozoa, and they show just the same predilection for certain tissues and organs as do the protozoa. They are like many of the parasitic protozoa in the fact that they live almost entirely by osmosis. Like the protozoa, they sometimes live for long periods of time in the body of the host without any sign of their presence, and perhaps in a state of lethargy, until their vigor and activity are restored to them by some lowering of the resistance of the host, or by some change in the part in which they had been lying which renders it more suitable to their necessities. They do not appear to furnish toxins which are dangerous to the health of the host, so that their efforts are produced (like the effects of such parasites as *myxobolus Pfeifferi*) by mechanical causes, destruction of the tissues in which they live and multiply, the stoppage of blood and lymphatic vessels and the changes consequent on this stoppage.

These conditions are naturally more dangerous when they affect the vital parts. On the other hand, when, like the protozoa, the

cancer cells are attacked by pathogenic organisms, bacteria and bacilli (as is almost invariably the case when they become exposed), they are rapidly destroyed, sometimes in great masses, and the effect on the host is disastrous. Some cancer cells can live for a long time outside the body of the host, although they do not, so far as we know, belong to the class of organisms which are sometimes not parasitic. They can live for weeks in glass tubes and then be implanted, as if they were just taken from the mass in which they lived. At present the cancer cells can only be implanted with success in animals of the same species as the animals from which they were taken. In this respect, again, they resemble certain of the protozoa. It may be that, with greater practice and experience, they will be induced to grow and multiply in animals of a different species, but Butlin very much doubts it, just as he doubts whether *Babesia bigemina*, a parasite of cattle, will be successfully implanted in a sheep. Cancer cells, like the parasitic protozoa, are never transformed into tissues of the host, and the structures which they cause to be built up are for their own services, not for the services of the host. They are not themselves transformed into any other kind of tissue, nor do they transform the cells of the body into cancer cells. From the moment they are unmistakably cancer cells they remain cancer cells, and from that moment they pursue only those two objects which are pursued by the protozoa—to live and to reproduce. And if they fail in these objects both the individual and the species perish. In reproduction they breed as true as any protozoon. Not only do carcinoma cells reproduce carcinoma cells and not sarcoma cells, but it is invariably the same variety of cell which is reproduced, with the same properties and powers and characteristics. It has been said that the cancer cells differ from the protozoa in the circumstance that they are not constant in their method of reproduction; that they multiply by budding or by mitosis, as pleases them, and that the protozoa never do so. If all the protozoa were thrown in a common receptacle for study, they would also be found to vary in their method of reproduction. Butlin believes it is only because the cancer cells have been treated in this fashion that they seem to be subject to no method. But he says separate them and study them in families, and it will be found that they are just as bound in this respect as the families of protozoa. The cells of

carcinoma multiply by endogenous multiplication and the cells of sarcoma multiply by fission or by budding.—*London Lancet.*

J. A. S.

SERUM TREATMENT OF INFLUENZAL MENINGITIS.—Wallstein (*Jour. Exper. Med.*, 1911, XIV, 73). Since more accurate studies on spinal fluid have been made, an increased number of cases of influenzal meningitis have been found, almost all of which have been fatal. Almost all cases are due to an influenzal bacteremia. The organism grows in the subdural space, and is swept through the blood. The organism was cultivated on agar slants for twenty-four hours, then washed off with salt solution, and two such cultures, 2 c. c. in all, were injected into the canal of a monkey, giving a disease, fatal in thirty-six hours to four days, and comparable to that in man. A goat was now treated with living organisms for eighteen months, when opsonins and agglutinins appeared in his serum, but the serum is not bactericidal in vitro. This serum was effectual in securing recovery if injected into the spinal canal twenty-four hours after inoculation. The bacilli are more freely engulfed by the leukocytes, their growth and eruption into the blood hindered. To be successful in the human disease, frequently-repeated applications of the serum to the spinal canal will be necessary. The diagnosis can usually be made by immediate microscopic study of the fluid.—J. A. S.

Charity Hospital Bulletin.

In Charge of DR. J. A. DANNA, House Surgeon.

A NEPHRECTOMY ON A WOMAN SIX MONTHS PREGNANT, NO INTERFERENCE WITH PREGNANCY.—Mrs. W. H. H., a white woman, age 22, was admitted to Ward 50, October 27, 1911, with a temperature of 104°, showing all the signs of some thorough intoxication. She was very much depressed and stupid, and unable to give a connected history. The blood was examined, but showed nothing of any importance. No Widal reaction or plasmodium; she looked so typical of typhoid, however, that she was treated for that trouble. On examination it was found that she was about six months pregnant. The urine showed pus, casts and albumen.

On October 30 she showed some signs of abortion and was moved to ward 48. There she was carefully watched and treated systematically. The pains and hemorrhage left her, but she still remained profusely septic and looked as though she could stand very little more. As she complained of pain on right side, the ureters were catheterized and the urine from the right side showed pus flowing and then clear urine with another spurt of pus, followed again by urine, this to continue as long as the catheter remains in situ. On the left side the urine was normal. As she continued to grow worse it was decided to expose the right kidney and see if something could not be done to help her. She was prepared, brought to the amphitheater, and, under a general anesthetic, the kidney was quickly exposed through the lumbar incision and brought to the surface, where it was found to be studded with small tubercular abscesses, and in such a condition that nothing but total removal seemed justified. This was done quickly and the patient returned to the ward. The temperature dropped to normal and continued there with the patient improving generally, until about the 20th of November, when she had a rise of temperature, and a cystoscopic examination showed pus still coming from the side from which the kidney was removed, due, I suppose, to the fact that the ligature cut through the ureter and the pus flowed through this patulous channel into the bladder. The wound in the back was washed out carefully and a larger drain inserted, and she has improved rapidly since, all pus having disappeared.

It was necessary to give her hypodermoclysis for weeks, and this caused several abscesses, which were incised and drained.

She is up and about now, and has shown no more symptoms of abortion, and looks as though she might, from present indications, carry the full nine months.

DR. W. S. STAFFORD,
First Assistant House Surgeon.

REPORT OF A CASE OF ANEURISM OF THE ASCENDING AORTA WITH RAPID ONSET AND FATAL TERMINATION IN ONE MONTH AND A HALF FROM APPEARANCE OF FIRST SYMPTOMS.—T. H., Case No. 404 of Clinic 11. White male, 41 years of age, married and father of several healthy children; a native of New Orleans

and resident of same since birth; laborer, and at time of admission to clinic a street sweeper. Applied to clinic on October 5, 1911.

FAMILY HISTORY.—Negative as to cause of death of both parents. His wife had never had any miscarriages.

PERSONAL HISTORY.—He had been a heavy drinker until the past few years and denied any venereal infection, while he had never been ill until the present trouble, with the exception of a severe fall he sustained three years ago, striking himself on the left side of the thorax over the region of the heart, to which patient ascribed his present symptoms.

PRESENT COMPLAINT.—For the past two weeks patient has had a severe dry cough, especially at night, or upon lying down at any time, with occasional pains over the region of the heart. These pains at times were severe and patient stated that they seemed to travel around the left side of his chest towards the back. There was no pain in the arms nor numbness of the hands. Patient was constipated, but appetite was excellent, and he stated that he felt a well man except for the occasional pains in his heart and the cough at night.

EXAMINATION.—Careful examination of the lungs failed to reveal any evidence of consolidation, but a few subcrepitant rales were audible in the right apex. Several examinations of the sputum after administration of ammonium iodid were negative for tubercle bacilli.

The heart dullness was at first examination not recognized as increased to the right, and the apex beat was three cm. outside the nipple line. Careful examination the second visit revealed an increase of cardiac dullness to the right for a distance of five centimeters, extending from the second to the fourth ribs. A soft to and fro murmur could be heard over the area, while both sounds of the heart could be heard distinctly at the apex. Both radial arteries pulsated synchronously with a blood pressure of 187. A diagnosis of aneurism of the ascending aorta was made, which was confirmed by fluoroscopic examination by Dr. Granger. Urine showed no abnormalities except a great excess of indican, and no pulsation could be elicited over the area of suspected aneurism. He was given a purgative of calomel, phenolphthallein and rhubarb, ten-grain doses of iodid of potash three times daily, sodium

nitrite, grs. ii, every three hours, and was advised to cease his manual work.

October 21. He feels better and has no pains in the cardiac region, but has a heavy feeling in his chest after straining. No indican in urin. Blood pressure 150. Sodium nitrite decreased to three times daily. Iodid continued. He is still working, but states that he does not lift anything.

October 23. Has continued working, and last night had a coughing spell without any expectoration and a return of cardiac pain. Blood pressure 145.

October 30. Feeling well except return of pain over the heart on exertion. No indican in urine. Blood pressure 152. No increase in dullness of aneurism.

He did not return to the clinic, and the following history was obtained from one of his neighbors. He continued to work and took to drinking again, when he was seized with a sudden pain in the chest on November 12. A physician was summoned and administered morphin, but he continued to have the pain in the upper portion of the chest and died suddenly within an hour. Pulse was good up to time of death. Evidently there had been a rupture of the sac and he was a victim of overconfidence in his own ability to diagnosticate his trouble. No postmortem was held.

This case is reported in full, as it is generally believed that aneurisms are comparatively rare in the ascending portion of the aorta, and to impress the necessity of body rest in accomplishing any therapeutic results with the condition.

ALLAN EUSTIS, B. S., Ph. B., M. D.,

*Visiting Physician to Charity Hospital, from the Outpatient
Department.*

Louisiana State Medical Society Notes.

In Charge of DR. JOSEPH D. MARTIN, Secretary, New Orleans.

CHAIRMEN OF SECTIONS, 1912 MEETING.

Practice of Medicine—Dr. Allan Eustis, New Orleans.
Surgery and Anatomy—Dr. L. Abramson, Shreveport.
Obstetrics and Gynecology—Dr. E. D. Martin, New Orleans.
Materia Medica and Therapeutics—Dr. J. T. Halsey, New Orleans.
Genito-Urinary and Rectal Diseases—Dr. A. Nelken, New Orleans.
Diseases of Children—Dr. W. W. Butterworth, New Orleans.
Nervous and Mental Diseases—Dr. John N. Thomas, Pineville.
Ear, Nose and Throat—Dr. F. C. Bennett, Monroe.
Cutaneous Medicine and Surgery—Drs. R. H. Blackman and O. W. Cosby, Monroe.
Physiology and Pathology—Dr. Randolph Lyons, New Orleans.
Bacteriology—Dr. O. L. Pothier, New Orleans.
X-Ray and Electro-Therapeutics—Dr. S. C. Barrow, Shreveport.
Hygiene and Sanitary Science—Dr. S. D. Porter, New Orleans.
Ophthalmology—Dr. Charles A. Bahn, New Orleans.
Medical Jurisprudence—Dr. E. D. Gardner, Clarks.

AN OPEN LETTER TO THE MEMBERS OF THE LOUISIANA STATE MEDICAL SOCIETY.

Your attention is called to the approaching meeting of the Louisiana State Medical Society, to be held at New Orleans, April 23 to 25, 1912.

The Committee on Arrangements, of which Dr. M. Couret, New Orleans, is Chairman, is already actively at work making preparations for the meeting, which will be a "corker" from every point of view. Men of national and international reputation have been invited to be present and address the members. Among our guests will be Dr. J. George Adami, of Montreal, the eminent pathologist, who has graciously signified his intention of participating in our deliberations. Others will give positive answers shortly.

Secretaries of component societies are reminded that the fiscal year of the Society begins January 1 of each year, and are requested to see that all information and settlement of dues of their members are promptly filed in due form with the State Secretary, so as to eliminate the trouble that often occurs at our annual meetings. Please give this your individual attention and request your members to help you. We want every component society to be in good standing, as this will be a record-breaking meeting. We can assure you that the Chairman of the Committee and the local profession of New Orleans will do their duty to make this meeting interesting and successful.

Be sure to come to New Orleans next April, dear doctor, and we promise you a scientific feast and a good time socially. Fraternally yours,

JOSEPH D. MARTIN, M. D., Secretary.

R. O. SIMMONS, President.

New Orleans, February 14, 1912.

Medical News Items.

INTERNS TO BE FIREMEN.—A volunteer fire department is the latest thing undertaken by the Charity Hospital interns living in the ambulance house. A small fire in room No. 12 some days ago prompted the organization of the corps.

DEATHS FROM TRICHINOSIS.—Although this disease has of late been very rare in this country, two deaths occurred recently in New Jersey as the result of eating uncooked ham.

WHITE PLAGUE IN ALASKA.—Tuberculosis has its grip on nearly 50 per cent of the white population of Alaska, according to Dr. M. H. Foster, past assistant surgeon of the Public Health and Marine Hospital Service. Dr. Foster declares that unless the disease is checked the entire population will be ultimately wiped out.

APPENDIX REMOVAL IS EASY.—According to the announcement made to surgeons of the Cleveland Academy of Medicine, an incision of only three-quarters of an inch is now necessary to remove the appendix, permitting the patient to leave the bed within twenty-four hours after the operation.—*Daily Press*.

AMERICAN SOCIETY OF TROPICAL MEDICINE.—The ninth annual meeting of the American Society of Tropical Medicine will be held in Atlantic City, Monday, June 3, 1912. It is important that the Secretary should be notified, without delay, of the titles of any communications or papers. The Council will meet on Saturday, June 1. The Society has been elected a constituent society of the Congress of American Physicians and Surgeons, which meets in Washington every three years. The Secretary, Dr. John M. Swan, is now located at Rochester, N. Y.

THE NEW ORLEANS CITY BOARD OF HEALTH has announced the promulgation of a new ordinance requiring the reporting of pertussis (whooping cough) and cerebro-spinal meningitis as communicable diseases, and this order is now effective.

THE AMERICAN JOURNAL OF CLINICAL MEDICINE.—This journal marked the nineteenth year of its existence by the issue of a "Progress" number.

"SEX HYGIENE, AND WHAT TO SAY TO THE BOY," is the title of a new book by Dr. Frank Lydston, announced to appear shortly.

THE AVOYELLES PARISH MEDICAL SOCIETY held its quarterly meeting at the Meyer Hotel at Marksville on Tuesday, February 6, and elected the following officers for the year 1912: President, Dr. W. A. Quirk, Evergreen; vice-president, Dr. M. E. Saucier, Marksville; secretary and treasurer, Dr. P. E. Brahic, Moreauville. Dr. T. A. Roy, Mansura, was re-elected delegate to the State Medical Society. The next meeting will be at Cottonport on the first Thursday in April.

THE SEVENTEENTH INTERNATIONAL MEDICAL CONGRESS.—The official announcement of the next International Medical Congress has been received by the JOURNAL. The meeting is to take place in London, August 6 to 12, 1913, under the patronage of the King of England, George V. The London address of the Congress is 13 Hinde street, London, W. The secretaries of the foreign countries are not yet announced.

MUZZLING OF DOGS IN LOUISIANA.—Owing to the number of people who have recently been bitten by dogs suffering from rabies, a law compelling the muzzling of dogs is soon to be enforced.

HEALTH BOARD SYSTEM SHOWN TO STUDENTS.—Members of the class of tropical medicine of Tulane University visited the office of the City Board of Health, to see the workings of the health department. Dr. O'Reilly took the class in charge and explained fully the workings of each department. The class was then taken to the sixth floor of the municipal annex, where an inspection of the laboratory under Dr. Archinard was made. The students a few days afterward were given a demonstration of the food inspection service at the slaughter-house under Dr. E. A. White, chief food inspector.

INDIVIDUAL DRINKING CUPS.—A crusade has begun in the City of New Orleans looking to the use of individual drinking cups in all of the public buildings. Individual cups have been installed in several of the large buildings and exchanges of the city, as a result of the crusade, and it is hoped that before long the public drinking cup will be a thing of the past.

FOOD SOON TO COME FROM PETROLEUM.—Dr. Robert Kennedy Duncan, President of the Industrial Development Commission of Pittsburgh, declares that the time is not far distant when the nutritious edible by-products of petroleum will be produced in quantities sufficient to give them a commercial value.

YELLOW JACK AT GUYAQUIL.—The death of the commander of the gunboat Yorktown, ordered to Guyaquil to look after American interests in the latest revolution, is a reminder that the scourge familiar in the past to the United States because of the proximity of Cuba, persists as a liability in a section which the opening of the Panama Canal will bring in closer relation with us.

FLY, SPITTING AND BIRTH RECORD LAWS TO BE ENFORCED.—All keepers of stables, and those who have animals who do not follow the law set down for the extermination of flies, will be prosecuted. The recording of births must in the future be strictly carried out, and the New Orleans Railway and Light Company has been given ninety days in which to show its ability to enforce the present law against spitting in street cars.

PERSONALS.—Passed Assistant Surgeon R. H. Von Ezdorf, of the U. S. P. H. and M. H. S., lectured at Shreveport, Alexandria, Baton Rouge and New Orleans during the past month, under the auspices of the Louisiana State Board of Health. His subject was "Anterior Poliomyelitis and Cerebro-Spinal Meningitis."

Dr. Winslow Anderson, of San Francisco, editor of the *Pacific Medical Journal*, was among the visitors to the New Orleans Carnival.

REMOVALS.—Dr. George Upton, from Macheca Building to 1302 Jackson avenue.

Medical Review of Reviews, from 12 Mt. Morris Park, N., New York City, to 206 Broadway.

Southern Medical Journal, from Nashville, Tenn., to Mobile, Ala.

Dr. T. H. Madden, from Mitchell, La., to Aycock.

Dr. J. R. Ducoté, from Cottonport, La., to Oklahoma City.

Dr. T. F. Long, from Shreveport, La., to Moffat, Colo.

Dr. F. R. Gomilla, from 817 St. Ferdinand street, New Orleans, to 911 St. Ferdinand.

MARRIED.—On February 10, 1912, Dr. George Clayton, Jr., to Miss N. Morris.

On February 10, 1912, Dr. John Lorenzo Robinson, of Hammond, to Miss Elizabeth Norwood, of St. Francisville.

DIED.—On January 27, 1912, Dr. G. S. Snyder, of Clinton, Miss.

On February 6, 1912, Dr. H. W. Tribble, of Jacksonville, Fla.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of respective publications. The acceptance of a book implies no obligation to review.

Practice of Medicine, by JAMES M. ANDERS, M. D., Ph. D., LL.D. Illustrated. Published by W. B. Saunders Company, Philadelphia and London, 1911.

This is the tenth edition, thoroughly revised, of Anders' text-book, the usefulness of which has been enhanced by a detailed consideration of the more practical aspects of medicine—e. g., etiology, diagnosis and treatment. More emphasis has been given to prophylactic measures and causal therapy. The section of Tropical Diseases has been enlarged. New and re-written matter upon this and other subjects of modern practice has been also included. The work maintains its merited reputation and is worth while having.

E. M. D.

Clinical Diagnosis, by CHARLES E. SIMON, B. A., M. D. Published by Lea & Febiger, Philadelphia and New York, 1911.

This is the seventh edition, enlarged and thoroughly revised, illustrated with 168 engravings and twenty-five plates, of a well-known manual of clinical diagnosis by means of laboratory methods for students, hospital physicians and practitioners.

The book has been entirely reconstructed; matter of secondary importance has been eliminated to make room for Part II, which is altogether new, the clinical portion enabling the technician to interpret the laboratory findings. This is really a valuable new addition to the work of a great teacher, and should make it most attractive for practitioners.

E. M. D.

International Clinics. Vol. III. Twenty-first series. By leading members of the medical profession throughout the world. Edited by H. W. CATTELL, A. M., M. D., Philadelphia. Published by J. B. Lippincott Company, Philadelphia and London, 1911.

The present volume contains a number of interesting articles on Therapeutics, Medicine, Pediatrics, Neurology, Surgery, Diseases of the Ear, Obstetrics and Ophthalmology. Two articles on Economics of Medicine,

the first "The Successful Practice of Medicine, by Thomas F. Reilly, M. D., of Fordham University, and "Economic Conditions Affecting Physicians," by Herman B. Allyn, M. D., of Pennsylvania University, are worth the price of the book. They afford pleasant, amusing and instructive reading.
E. M. D.

Gould's Pronouncing Dictionary. Revised. Sixth edition. 34,000 words. P. Blakiston's Son & Co., Philadelphia.

The changes in medical nomenclature demand constant revision in the dictionaries, and the editor and publishers of this little book have satisfied this need.

A Manual of Materia Medica for Medical Students, by E. QUIN THORNTON, M. D. Lea & Febiger, Philadelphia and New York.

With introductory chapters devoted to the consideration of the names of drugs, the method of prescription-writing and pharmaceutical Latin, the work is, for the most part, devoted to the specification of drugs themselves. An alphabetical arrangement is followed, grouping compounds and salts of each elemental drug or chemical substance under the head of the basic drug. Chemical formulæ, where possible, are presented, with a full description of the drug, indicating the action and uses, incompatibilities and dosage.

The concluding chapters are devoted to the officinal preparations, to which is appended a posologic table.

The work is a creditable effort of a teacher in the subject he undertakes, and the practical character of the text must commend it.
DYER.

N. B.—In the February number of the JOURNAL the review of "Diseases of the Stomach" was credited to Dr. Storck, when actually it was Dr. E. M. Dupaquier who wrote the review. The JOURNAL regrets the error, and is pleased to make this correction at the first opportunity.

Publications Received.

LEA & FEBIGER, Philadelphia and New York, 1912.

Infections of the hand, by Allan B. Kanavel, M. D.

C. V. MOSBY COMPANY, St. Louis, 1912.

Practical Electro-Therapeutics and X-Ray Therapy, by J. M. Martin, M. D.

J. B. LIPPINCOTT COMPANY, Philadelphia and London, 1912.

A Hand-Book of Medical Diagnosis, by J. C. Wilson, A. M., M. D.

P. BLAKISTON'S SON & CO., Philadelphia, 1912.

Practical Gynecology, by E. E. Montgomery, M. D., LL.D. Fourth edition, revised and enlarged.

A Compend of Genito-Urinary Diseases and Syphilis, by Charles S. Hirsch, M. D. Second edition.

W. B. SAUNDERS & CO., Philadelphia and London, 1912.

Diseases of the Skin and the Eruptive Fevers, by J. Frank Schamberg, A. B., M. D. Second edition, thoroughly revised.

A Hand-Book of Practical Treatment, edited by John H. Musser, M. D., LL.D., and A. O. J. Kelly.

Nervous and Mental Diseases, by Archibald Church, M. D., and Frederick Peterson, M. D.

Physical Diagnosis, by John C. Da Costa, Jr., M. D. Second edition, thoroughly revised.

Clinical Diagnosis, by James Campbell Todd, Ph. B., M. D. Second edition, revised and enlarged.

A Manual of Pathology, by Guthrie Connell, M. D. Second edition, thoroughly revised.

MISCELLANEOUS.

Ophthalmia Neonatorum, by J. W. Kerr, Assistant Surgeon-General. (Washington Government Printing Office, 1912.)

A Digest of the Laws and Regulations of the Various States Relating to the Reporting of Cases of Sickness, by John W. Frank, Assistant Surgeon-General. (Washington Government Printing Office, 1912.)

Proceedings of the Canal Zone Medical Association for the Half Year: October 1, 1910, to March 1, 1911. Vol. III, part II. (Isthmian Canal Commission Press, Mt. Hope, C. Z., 1912.)

Transactions of the American Surgical Association. Vol. 29. Edited by Archibald McLaren, M. D. (Wm. J. Doran Press, Philadelphia, 1911.)

Public Health Reports. Vol. XXVII, Nos. 1, 2, 3, 4, 5. (Washington Government Printing Office, 1912.)

Report of the Department of Sanitation of the Isthmian Canal Commission for the Month of November, 1911.

Studies Upon Leprosy. Public Health Bulletin, Nos. 47 and 50. (Washington Government Printing Office, 1912.)

Origin and Prevalence of Typhoid Fever in Fort Smith, Arkansas, and Measures Necessary for Its Control, by W. H. Frost. Washington Government Printing Office, 1912.)

Monthly Bulletin of the Department of Health of the City of New York. (Clarence Nathan Press, New York, 1912.)

Reprints.

The Specific Treatment of Pellagra, With Observations on the Reactions Following: Salvarsan, Syphilis and Pellagra, by E. H. Martin, M. D.

The Abnormal Temperature—A Saving Act of Nature Rather Than a Result of Disease, by Martin Cavana, M. D.

The Operative Treatment of Glaucoma, With Special Reference to the LaGrange Method, by Casey A. Wood, M. D.

A Typhoid Bacillus-Carrier of Forty-six Years' Standing, and a Large Outbreak of Milk-Borne Typhoid Fever Traced to This Source, by Chas. Boldman, M. D., and W. Carey Noble, M. D.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans
FOR JANUARY, 1912.

CAUSE.	White.	Colored.	Total.
Typhoid Fever.....		2	2
Intermittent Fever (Malarial Cachexia)			
Smallpox.....			
Measles			
Scarlet Fever.....	2		2
Whooping Cough.....		1	1
Diphtheria and Croup.....	1		1
Influenza	11	7	18
Cholera Nostras.....			
Pyemia and Septicemia			
Tuberculosis.....	52	37	89
Cancer.....	20	5	25
Rheumatism and Gout	3		3
Diabetes	4	1	5
Alcoholism			
Encephalitis and Meningitis.....	1	2	3
Locomotor Ataxia.....	3		3
Congestion, Hemorrhage and Softening of Brain.....	24	8	32
Paralysis	2	3	5
Convulsions of Infants	3	2	5
Other Diseases of Infancy	10	4	14
Tetanus.....		5	5
Other Nervous Diseases	2		2
Heart Diseases.....	67	44	111
Bronchitis	6	3	9
Pneumonia and Broncho-Pneumonia.....	16	25	41
Other Respiratory Diseases.....	1	3	4
Ulcer of Stomach.....			
Other Diseases of the Stomach	1	7	8
Diarrhea, Dysentery and Enteritis.....	25	8	33
Hernia, Intestinal Obstruction.....	2		2
Cirrhosis of Liver.....	9	6	15
Other Diseases of the Liver	3	1	4
Simple Peritonitis			
Appendicitis.....	4	2	6
Bright's Disease	34	20	54
Other Genito-Urinary Diseases.....	1	9	10
Puerperal Diseases	3	2	5
Senile Debility.....	7	6	13
Suicide	5	1	6
Injuries.....	25	26	51
All Other Causes.....	28	17	45
TOTAL.....	375	257	632

Still-Born Children—White, 23; colored, 29; total, 52.

Population of City (estimated)—White, 272,000; colored, 101,000;
total, 373,000.

Death Rate per 1000 per annum for Month—White, 16.54; colored,
30.53; total, 20.33.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 30.13
Mean temperature 50.00
Total precipitation 5.10 inches.
Prevailing direction of wind, north.

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Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

Nerves and their Sensations—Especially Pain.*

By CARROLL W. ALLEN, M. D., New Orleans, La.

In the practical part of this discussion we are interested only in the afferent nerves, and of these particularly those that transmit painful impressions, the sensory nerves. However, the subject of pain and nerve sensations generally is of such tremendous interest to the physician as well as to the surgeon as it is this one subjective symptom which brings us most of our patients, and which in its protean and manifold manifestations we are daily striving to relieve.

No other phenomenon connected with the life history of the human body has been so great a factor in the historical development of medicine as pain. It can readily be conceived that the first medical thought and first effort on the part of primitive man was directed to the relief of pain. And yet, though it is the most universal symptom of disease, there has been no adequate or entirely satisfactory explanation of its nature and mode of action.

* Read before the Orleans Parish Medical Society, January 22, 1912.

It would, therefore, not seem out of place, particularly in a discussion of this kind, to deal more liberally with the subject and attempt to advance some theory as to what is pain. We must admit that we know less about the nervous system than about any of the other great systems of the human body, and the function of many parts of the brain is as great a mystery to-day as it was to our medical forefathers. We know absolutely nothing about the metabolism of the nervous system, but certain anatomical and functional facts have been established upon which various theories have been built, and it is from this information that we will draw in the present discussion; considering, first, such anatomical and physiological points as should be borne in mind.

To many, most of these facts are an old familiar story, and their repetition would scarcely be excusable and may be regarded as a superfluous waste of time were it not necessary to consider them for a proper conception of the theories to be later advanced.

The sensory nerves have their sensory organs at their peripheral termination. These are of several kinds—touch corpuscles, end bulbs, touch cells and free nerve endings, all of which are distributed to the peripheral tissues, cutaneous, mucous, etc. In addition to the above, there are the Pacinian corpuscles, distributed in the subcutaneous parts, usually lying in cellular tissues, at times deeply situated between muscle bundles; their function is not clearly understood, but they seem to be connected with the sensory apparatus, probably with the pressure sense.

In addition to these we have the nerves of special sense, which are sensory nerves, only highly specialized in their function. Aside from nerves of special sense, the various qualities ascribed to these nerves are (1) pain; (2) tactility, or common sensation; (3) locality; (4) pressure sense; (5) temperature sense. While in all operations under local anesthesia we are concerned more especially at the time with the pain conducting function of the nerve, we must not lose sight of the fact that most cutaneous nerves are trophic as well, and the deeper nerves contain in addition motor fibres. The operator, under local anesthesia, becomes especially a nerve anatomist, learning to search out, inject and protect each individual nerve, thus saving its sensory as well as its motor and trophic function.

We have said that sensory nerves have their sensory organs at

their peripheral termination, and we say that it is the brain that feels, but the brain is absolutely devoid of painful sensations; the exposed brain of a thoroughly conscious patient can be operated upon without any sensations whatever of pain; stimulation of various parts of the brain may give rise to other sensations but never pain.

The nerves themselves have very little sensation, but refer any stimulation or irritation applied to them to their peripheral distribution.

What is pain? Is it a special sense of these afferent nerves, or is it an exaggeration of common sensation, quantitative increase of sensibility? If pain were a special sense and traveled along definitive nerve paths, there ought logically to exist a pain center, for all special senses possess a special center, and same may be said of the other cutaneous senses.

All of our numerous experiments and many clinical observations have failed to locate such centers.

The destruction in animals of the gyrus fornicatus or the hippocampal region is said to be followed by more or less loss of common or tactile sensation, and the entire destruction of these regions on one side of the brain is followed by protracted hemianesthesia.

There is, however, no pathological evidence to make the conclusion drawn from these experiments applicable to man, and the anatomical distribution of the sensory fibers, as their path turns outward from the internal capsule, seems to prove that it is not. It is indeed a wonderful thing that the most highly organized and complex structure within the human body should be entirely devoid of painful impressions.

Although we are most familiar with the sensibility of the skin, and we believe that we partly understand the nature of the impressions upon it and the mode of conveyance to the sensorium, yet there is a difficulty in comprehending the operation of all the organs of the senses—a difficulty not removed by the apparent simplicity of that of touch.

But, although the impression be thus traced to the extremity of the nerve, still we comprehend nothing of the nature of that impression, or of the manner in which it is transmitted to the sensorium. To the most minute examination the nerves in all their course, and when they are expanded into the external organs of sense

seem the same in substance and in structure. The disturbance of the extremity of the nerve, the vibrations upon it, or the images painted upon its surface, cannot be transmitted to the brain according to any physical laws with which we are acquainted. Experiments prove what is suggested by anatomy, that only the organs are appropriated to particular classes of sensation, but that the nerves intermediate between the brain and the outward organs are respectively capable of receiving no other sensations but such as are adapted to their particular organ. Any impression on the nerve of the eye, the ear, or on the nerve of smell, or of taste, excite only ideas of vision, sound or smell, etc. No education or amount of exercise *will enable* one nerve to replace the other. We cannot comprehend anything of the manner in which nerves are affected; certainly we know nothing of the manner in which sensation is propagated or the mind ultimately influenced.

The manner of determining the relative sensibility of different nerves by comparison or a study of the many different causes affecting sensibility, is, at times, made extremely difficult for the observer who must depend entirely upon the statements of the individual experimented upon for his information; and in animals, as can be well understood, the difficulties and possibilities of error are greater.

The senses are not equally developed in all individuals and are differently developed in man and animals, according to their different needs. We find every organ of sense, with the exception of that of touch more highly developed in brute than in man. In the eagle and the hawk, in the gazelle and the feline tribe, the perfection of the sense of sight is admirable; in the dog, wolf, hyena, and most animals and birds of prey, the sense of smell is uncommonly acute.

The term "anesthesia" denotes the loss of tactility, and in its broad acceptation of all other sensations as well; analgesia means the loss of the sense of pain alone; thermo-anesthesia, the loss of temperature sense.

Some individuals are affected peculiarly by what should be painful stimuli, and do not complain of pain as the most trying symptom; thus, it is related that, in the pre-anesthetic days, a French surgeon was amputating a limb, and, noticing an expression of great distress upon the patient's face, said: "I fear that

I am causing you great pain." The reply was: "No. The pain is nothing, but the noise of the saw sets my teeth on edge."

We find it equally difficult to give a satisfactory definition for pain. It may be regarded, however, as a peculiar discomfort or suffering caused by disturbances of the sensory nerves or nerve cells, which induce a condition of over stimulation; thus, any of our sensations may become painful if the stimulus is sufficiently strong or prolonged. This will be illustrated later.

From a restricted philosophical point of view pain may be considered as a reaction of the organism, in part or in whole, to harmful influences. This latter is more in accord with the views of the biologists, who see in the contractions and expansions occurring in minute protoplasmic life an expression in a primordial way of the senses of pleasure and pain, expanding in response to pleasureable, healthful influences and contracting in reaction to painful or harmful stimuli. These reactions are considered the germ of the idea, which by many multiplications, complications and added phenomena, have come to make the many-sided, complex figure of the human pleasure-pain sense.

There may be many kinds of pain and no less real than those pains due to the injury of a sensory nerve. We may have pain in consciousness connected with the more complex processes, such as fear, anxiety, anger, or the pain of sorrow, or a "broken heart" and other conditions.

If pain is to be regarded as a reaction, there must be at least two factors involved in its production; first, the susceptibility of the individual; and, secondly, the character or intensity of the stimuli or inducing agency.

Pain may be to many but an incident of little concern; they are either anesthetic or stoic, feeling very little, or able to control their expressions of pain; others are hyperesthetic or exaggerational, either being extremely susceptible, or they possess little or no control over their feelings. These differences are largely individual, although there exist certain factors in the race, age, social and educational status of the individual which influence this susceptibility; thus, it is stated that the dark-skinned races, Slavs and Teutons, are less susceptible to pain than other races, while the Latin and Semitic stock is most susceptible. Old age generally is less susceptible than is youth or adolescence, due to the more sluggish

condition of the nervous system, while infancy, due to the absence of the psychic influence and poor sense of locality, may bear certain pain well, but is easily shocked by severe trauma.

The social condition, refinement and education, status and occupation have much to do with the susceptibility to painful impressions, as we would naturally suppose; thus, a highly refined individual, following an intellectual pursuit, would be expected, from his method of life, breeding and occupation, to have a more highly developed and sensitive nervous system than the laborer or farm hand accustomed to exposure with the knocks and buffets of a hard life. The inability to bear pain on the part of certain high-strung individuals of nervous temperament, must not be ascribed always to cowardice, for such persons often bear themselves with great fortitude and heroism when exposed to grave danger; this has often been noticed in military officers who have always shown great bravery on the battlefield, but who would complain bitterly when pain was inflicted during some minor attention.

In this last class of cases the psychic state of the individual plays a large part. Of this factor we shall have more to say later.

Any of our sensations may become painful if the stimulus is sufficiently strong or prolonged; the skin touched lightly affords normal tactile sensations, but, if the pressure is severe, a general impression approaching that of pain is produced.

The same may be said of thermic sensations, while the power of the skin to recognize differences in temperature is very acute, the ability to judge the absolute degree of temperature is very slight. When the degree of temperature is raised or lowered beyond a certain point the thermic sense is no longer excited but sensations of pain are produced. If we put our hand into freezing or very hot water, it is difficult to say at once whether it is hot or cold, in either case pain being the only sensation produced. The time for the arrival of temperature impressions at the brain is remarkably long when compared with the rate at which tactile impressions travel. That there must be special nerve endings for the reception of thermic impressions would seem proved by the following facts: when heat or cold is applied to a nerve trunk it does not give rise to the sensations; if a hot or cold object is moved slowly over the surface of the skin, some parts feel no temperature change, some feel increased heat and others only cold. These "hot" and

“cold” perceptions are said to possess different kinds of nerve terminals. It would seem that these nerve endings are different from those which receive tactile and pressure impressions, because the appreciation of differences of temperature is very delicately developed in certain areas where tactile sensation is not most acute. Thus, the cheeks and the eyelids are very sensitive to heat, while sensation is not most acute here, the middle of the chest is also very sensitive to heat, but very dull to tactile impressions.

That all the different sensations of the skin possess different nerve endings or paths for their transmissions is again argued in the difference between the senses of locality and pressure, as the pressure sense is found not to be so keenly developed in parts where the sense of locality is most acute. This sense of pressure may be more accurately determined by the skin of the forearm than by that of the finger tip, although the latter is nine times more sensitive to ordinary tactile impressions.

Any of these sensations, with the exception of that of locality, may become painful if increased beyond a certain point. The same may be said in a modified way of the exercise of the functions of special sense. Moderate light does not prove of discomfort to the normal eye, but if intense, the pain may be severe. It, however, has been observed that in cases of total blindness, due to atrophy of the optic nerve, very intense light may produce pain. It is probably then not the optic nerve, or not it alone, which feels the pain of over-stimulation, but the trigeminus. Sounds such as music cause pleasure when conveyed to the brain over the auditory nerve, but if it were possible that these pleasurable sounds could be magnified to a high degree, they would undoubtedly become painful; but here, as in the case of the other noises which set up violent sound waves, it is probably not the auditory nerve, or not it alone, as in the case of the eye, which feels the pain, as it is most likely due to mechanical injury to the tympanum and ossicles supplied by the fifth nerve. Certain tastes or odors when of moderate intensity, are pleasant, but may become decidedly disagreeable or provoke other unpleasant sensations when markedly increased. But here these special end organs seem to have a chemical function, while the excitation of nerves generally is rather of a mechanical nature.

It will probably now not be out of place to consider certain

other facts in connection with pain and sensations generally. Pain may be caused by mechanical, thermal, chemical, electrical or other means.

The duration and extent of a stimulation may determine in great measure the sensation produced, as illustrated by the contact of a hot surface for a short or long time, or by picking the skin lightly with one pin or with a number at the same time.

There are some facts which seem to point to the conclusion that pain has a functional independence, whatever may be said regarding its anatomical independence—that is, whether there are special nerve fibers which conduct pain, a point on which laboratory experiments are conflicting or in doubt. As an illustration, pain may be abolished without destroying or impairing any of the other sensibilities, as is seen in analgesia, brought on by the administration of a general anesthetic, in which observations prove the fact that pain disappears first, then memory.

On the other hand, other sensations may be destroyed while pain remains. When a part of the body (an extremity) is rendered anemic, tactility disappears first, followed by pain, then the thermic sense.

Pain rarely ever remains constant in the same degree, but intermits, while the stimulus may remain constant. This intermittance may take the nature of a throb, as in headache; jumps, as in toothache, or as in bonefelons, in which the paroxysms become overpowering. These intermissions in some cases are no doubt synchronous with the pulse, or due to other reactions in the vascular system, bringing about distension or vascular contractions. Other influences also determine the onset of the paroxysms or increases of intensity as seen in neuralgia.

Certain other phenomena are a delay noticed in recording a painful impression following a blow. The shock from the blow is often felt an appreciable interval of time before the pain is felt; this may or may not be due to the shock having paralyzed, for a moment, the sensory nerve endings or their power of transmission. But this would hardly seem the case in injuries of moderate severity which yet cause pain.

While we know that tactile impressions travel at the rate of forty-two meters per second, and painful impressions only at the rate of ten meters per second, still the delay is much greater than would be accounted for by this difference.

Again, the lasting quality of a painful impression is some times remarkable. Pains do not always pass away when the stimulation ceases, but may remain for some time as an after image. This is probably due to the fact that the intense stimulation necessary for the production of pain produces a more decided and lasting character in the nervous changes than other sensations do.

The sensory apparatus, once excited, does not immediately subside into a non-active state, but the pulse or wave of molecular change which has been set up in the nerve centers remains for a longer or shorter time. To better understand this phenomenon we can take for an illustration the optical delusion produced by a very rapidly revolved torch, which appears as a circle of fire, because the impression created by the torch at any one point of the circle does not disappear before it has again reached the same point; or the same may be illustrated in the revolving spokes of a wheel.

A contrast noticed in the apparent absence of pain when the intensity of a painful stimulus is suddenly lessened, even though the lessened intensity would be painful under other conditions, is explained in the above way.

Practically all physiologists agree that we cannot feel two entirely different sensations at the same time. One must be paramount and the other subordinate, or each impression will be diminished, so that their united influence would only equal what either would be alone. And the same is true of painful sensations. A man with both legs broken feels pain in but one at a time. The same thing takes place continually with reference to all of our sensations, whether of pleasure or pain; we are only conscious of what may be the paramount influence. This fact explains in a great measure the psychic control over pain. With the mind and attention occupied by some all-absorbing and engrossing subject great enough to hold the attention, pain is not felt, as illustrated elsewhere in this discussion.

Another important consideration in the exercise of our sensations is the necessity for a change of stimuli. Any sensation, whether pleasurable or otherwise, if too long continued, becomes weakened or exhausted. It is only by constant change, contrast and comparison, that we continue to exercise our many senses, but two of them at the same time. We can illustrate this by pleasurable sensations; we will say, at the theater, where the senses of

sight and hearing are both exercised, but alternately, the change enhancing and increasing the pleasure derived from the exercise of the other. Music to the blind is not so pleasing as to the more fortunate who can see, and the deaf derive less pleasure from the sense of sight alone, although, in either case, it may be the only amusement or distraction which they have. Cold and heat are distinct sensations, and this is so far important that, without such contrast, we should not continue to enjoy the sense, for the variety of contrast is absolutely necessary to sensation. The hand placed in moderately hot water soon becomes accustomed to it, and we no longer feel the sensation, or less so, and the same with cold. The first shock is the greatest, and the hand alternately plunged from moderately hot into cold water, feels the contrast more keenly as the sense is excited by the change. It is by a comparison of cold and heat that we enjoy either sensation. All senses are exhausted by exercise without change, but some are more lasting than others. We note the relish with which one enjoys cool air after a long and exhausting high temperature, or the comfort experienced by a warm fire during the midst of a cold winter.

If we take, for example, vision, and gaze fixedly at a single color or a single object, the sense is soon exhausted until we see nothing.

The psychic control over pain is very great indeed, probably much greater than even the medical mind fully appreciates on casual thought. This psychic control over pain, as well as over the other sense, is thoroughly in accord with the recognized physiological law that we cannot be conscious of two sensations at the same time. With the mind intently fixed on the idea that pain is to be inflicted, the suffering is always more acute; and, vice versa, with the mind intently fixed and absorbed by some object or aim in view, the greatest mutilations are possible without complaint. This is seen in the case of religious devotees and fanatics, who often inflict the severest personal chastisement without apparent pain.

With the attention fixed on the idea that pain is to be inflicted and all the senses keenly alive and active, awaiting the impression, the least touch or manipulation may excite the idea of pain and cause the patient to cry out. One feels the stick of a pin much more keenly when watching and waiting for it to pierce the flesh.

On the other hand, the most severe injuries may often be inflicted when the attention is diverted or the mind intensely fixed upon other things, as can be illustrated by frequent incidents upon the battlefields, where arms have been shot away or other severe injuries inflicted without the individual being conscious of it until his attention is drawn to it. For instance, we are unconscious of noises when our mind and attention is firmly fixed upon other things, and with our mind so occupied we may even look at things without seeing them.

Numerous illustrations could be given of the psychic control over pain or its influence in producing shock. It is related that a French criminal was experimented upon, being led to believe that he was to be bled to death. He was accordingly blindfolded and prepared. His arm was severely pinched when he was told that a vein had been opened. The surgeons who were making the experiment allowed a small stream of warm water to trickle over the arm, pretending that it was the escaping blood. One observer then took charge of the pulse, and, pretending to count it, reported from time to time that it was gradually growing weaker and the patient's strength failing. The psychical impression was too much for the man to resist. He accordingly grew weaker and weaker, being influenced by the suggestions of those about him, who very seriously announced every few minutes that he was gradually sinking. This was carried to the point of producing psychic inhibition of the heart, resulting in arrest of its action and death. Numerous other instances could be related, but one more will suffice to illustrate this extreme psychic influence sometimes exercised: A French soldier (Boutibonne) was in the thick of the fight at Wagram. Men were falling all around him, when he felt both his legs being carried away by a cannon ball. He sank down about eighteen inches and fell back benumbed by the shock. He was told by those around him that if he remained perfectly quiet it would lessen the hemorrhage; he accordingly lay absolutely quiet until the next morning, when the surgeons reached him, and found that the cannon ball had passed through the ground beneath his feet, which sank into the furrow, but that he had been entirely unhurt. (Related in "Sensation and Pain," Taylor, p. 55.)

The state of mind has much to do with the activity of all our

senses. By our own mental operations we can deceive ourselves by delusions of vivid reality, which at times can be controlled only by our reason. By a mental state of dread, fear or hope, continuously exercised, we can excite in our senses sounds, visions and other sensations. Shipwrecked sailors, anxiously waiting and hoping for rescue, with their eyes strained across a waste of water, eagerly seeking a sail, often in their imagination see ships approaching, and these delusions occur long before the bodily forces are exhausted by hunger and thirst. Numerous similar accounts have been published by hunters and travelers lost upon the prairies or desert, and knowing that searching parties would be sent out, have heard and seen in their anxiety the approach of galloping horsemen in vivid reality, only to have the sight and sounds fade away like a mirage on the exercise of reason. A similar experience is related by Taylor in "Sensation and Pain." In the early days of Illinois he was lost on a dark night upon the prairie. There was no danger, only the discomfort of remaining out all night. He wandered for several hours trying to find his way, but to no avail. He realized that his absence from home would make his friends anxious and he would be searched for; he accordingly was on the alert for the sound of horses' feet and a voice calling. He listened intently and felt sure of the approach of a galloping horse. The sound gradually approached and grew more and more distinct, but finally faded away, only to be repeated time and again. In reasoning the matter over, he concluded that his senses were deluding him; he then turned in the opposite direction, and, after listening intently, he heard the same sounds from that direction and from any direction from which he listened. He concluded that he was deceived by his own senses. He laid down to sleep and next morning found his way home and learned that no one had been searching for him. A scared child or nervous woman will hear and see a thief in the room at night when there is none there.

Under similar conditions the senses of touch and pressure are equally and vividly deceptive, and the same may be said of all our senses. Hypnotism is simply a more extreme concentration of the attention.

Very practical use can be made of the fact that sensations of whatever kind are not only mental, but depend for force and quality on the actual present state of the mind. Conscious sen-

sation, whether objective or subjective, is a mental act. A sensory impulse becomes a conscious sensation only by producing a display of energy in the cerebral nerve centers or brain of a certain or cognizable degree of force, and then only when the attention is not engaged with other relatively paramount sensations. "Attention, occupied with one sensation, excludes other sensations while thus occupied" (Taylor).

Having recognized this psychic influence over our sensations, we can readily understand why children and nervous individuals who are unable to exercise any self-control, suffer such mental torture when about to undergo some trivial attention, and why such subjects, when taken into an operating-room, with its strange surroundings, white-capped and masked operators, to undergo some operation under local anesthesia, with all their senses keenly alert in dreadful anticipation of the impending procedure, magnify so greatly in their own minds their sensations that tactility is often interpreted as pain. The least touch causing them to jump and start with fright.

"Cowards die many times before their death;
The valiant never taste of death but once."

It is for this reason that the preliminary hypodermic of a small dose of morphin alone or combined with scopolamin, by dulling their sensibilities and mental activities, producing a somnolent, tranquil or inactive state of mind, thus protecting the patient against himself, has proved so useful a preliminary or adjunct in all local anesthetic procedures upon nervous or highly apprehensive individuals.

DISTRIBUTION OF SENSATION.—The skin is the great sensory organ of the body, and to it are distributed most of the sensory nerves, but the distribution of these nerves vary within certain limits. It is provided that the more a part is exposed, and in proportion to its delicacy of organization, the more exquisitely contrived and highly developed is the apparatus for its protection and the more preemptory is the demand for the activity of that mechanism. As in the case of the eye protected by its lids, which acts involuntarily for protection and before the will could set them in motion. And the same with the hand, which is involuntarily withdrawn from the first touch of danger before the will can act. The more exposed a part, the more highly developed is its sensi-

bility. The sensibility of the back and buttocks is dull when compared to that of the face or hands. Tickling the lip with a straw or feather becomes extremely unpleasant, while on the back it may not be felt.

Certain senses are limited almost exclusively to the skin, as tactility, locality and thermic sense. Although with the latter certain mucous surfaces feel both heat and cold, as experienced in the case of hot or cold drinks too rapidly swallowed, when the stomach distinctly feels the sensation, or in the case of ice water enemas given in cases of fever, the bowel feels the sense of cold.

Subcutaneous cellular tissue and fat have very little sensation. In the subcutaneous fat tissue and other parts further removed from the surface, are encountered the pacinian corpuscles, which are visible to the naked eye as little globular-like masses. They are connected with sensory nerves and transmit painful impressions; what other functions they possess, if any, is not known.

Between the muscle bundles are numerous small nerves which are quite sensitive to pain; otherwise, muscle fiber is almost devoid of sensation.

The periosteum is quite sensitive; acutely so in the inflamed state. Bones receive nerve fibers from the overlying periosteum, but when the periosteum has been anesthetized, or has been denuded, the bone is then quite insensible. Marrow is sensitive, but varies greatly in different individuals. It receives nerve fibers from the same source as the bone, and when these have been anesthetized or destroyed the marrow is then insensitive. The same can be said of perichondrium and cartilage. The perichondrium is sensitive, but cartilage not so.

Tendon sheaths are sensitive, but tendons and aponeurosis possess very little if any sensation. Synovial membranes are quite sensitive. The mucous membrane of all the passages communicating with the surface are quite sensitive; that covering the gums and hard palate much less so than that of the surrounding parts.

Some distance from the external openings these parts lose their sensation. The mucous membrane of the esophagus and trachea are insensitive; the esophagus, however, has a limited sensibility for heat.

The sensitiveness of the various cavities and their contents—cranial, thoracic and abdominal—will be dealt with in dealing with these parts.

All organs have certain sensations and respond to certain impulses, nervous and otherwise, although normally we are not conscious of their actions. Thus, the heart, while insensible to touch, is yet alive to every variation in the circulation, subject to change from every alteration of posture or exertion, and is in sympathy of the strictest kind with the constitutional processes.

One of the most interesting theories of pain, and to us the most plausible, at least in the present state of knowledge, is the theory of quantitative increase of normal sensation. This beautiful theory was admirably presented by that great philosopher of medicine, Prof. C. Schleich, in his own inimitable, yet simple and effective style in an address on anesthetics at the von Bergmann Memorial. The following quotations are extracts from this address:

"Is pain a sensation of physical discomfort conducted over nervous paths designed for this specific impression, or is this general sensation of a threatening character only an increase or abnormal excitation of the tactile sensation?"

"Are these special nerves of pain implanted in the living organisms to receive disturbing impressions, or do all sensory nerves—that is, all ramifications of the cerebro-spinal plexus, if abnormally stimulated—become conductors of exceptionally perceptible cerebral impressions?" (2) "Is pain only a quantitative increase of sensibility, or is it a psycho-nervous function of a special kind?"

"If we accept Darwin's theory of evolution, all living tissue must have been evolved by adaptation to the conditions of organic life. Thus certain nerve paths, originally serving the simplest tactile and reflex functions, might have evolved themselves by adaptation and heredity into carriers of impressions or discomfort."

"This theory seems to me to be amply borne out by the observations first reported by me, and afterwards confirmed by Leander, Block and Braun, that all nervous paths appertaining to the visceral system, including the sympathetic system, that intermediary brain, as it has been called, are primarily non-susceptible to painful impressions. Only after the surgeon has worked for some time on the intestines, the walls of the stomach are the uterus, the astonished ganglia and nerve branches never before bothered by external interference, so to speak, recovering from their perplexity become sensible of the abnormal lesion and conduct, and thus produce the sensation of pain. Does not the accumulation of visceral pains after some laparotomies, with their sudden attacks of post-operative colic, speak plainly of the possibility of nervous pain, which, in the economy of nature, originally were designed for entirely different functions? Thus we see in operations, for instance on the visceral peritoneum, the evolution of nerves in a primarily insensible region into conductors of pain, and the same process of evolution has taken place on the external surface of the body. The tactile nerves have, in the course of many thousands of years, learned to send, at the irruption of external forces, a quick, incisive warning to the soul, saying, 'There is something threatening and destructive.'"

"Hence, pain is a warner, an exhorter, calling for defense, for fight, for

the employment of all measures of resistance and self-preservation. But how is it that in these central messages a contact which is usually transmitted as tactile, heat or muscular sensation assumes at once the character of a fiery streak, arousing the brain? How is it that such a peculiarly eccentric stormy wave rushes over the special paths, usually transmitting only local impressions? This can only be explained by the assumption that the impression of pain necessitates a defect in the transmission, a disturbance in the current and the isolation. Here comes my theory of the inhibitory and isolating function of the neurilemma and the neuroglia, which may be condensed in the sentence that pain is the effect of an electrical short circuit of the sensory nerve paths. All nerves are imbedded in an isolating sheath of connective tissue. The neurilemma plays the same rôle as the green silk thread covering the copper wire of our electric batteries. If the neurilemma is forcibly broken from the outside, or pathologically loosened or softened from the inside, there is a lateral short circuit comparable to a fiery spark, into which all the radiating nerve-currents are discharged, and this short circuit causes a general collective message of alarm to be registered in the brain, notifying it of a defect at the periphery, differing greatly from the usual impressions received over the same paths. This produces a general impression of discomfort at being unable to quickly localize the unusual general message, a sensation of confusion, with threats of destruction, which chaotically rushes through the different centers of perception, and it is this sensation which we conventionally call pain."

"Its cause is an organic or dynamic lesion of the lateral inhibition or isolation of the nerve branches. We must assume that the normal tissue fluids have an inhibitory isolating influence, favorable to the nerve currents, and that pathological or artificial changes in the fluids surrounding and permeating the neurilemma may as readily cause lateral short circuits as foreign bodies, crystals or micro-organisms do, which directly injure the isolations of the nerve branches. At this point my deducting views had reached a promising stage. If this theory of the function of connective tissue for the mutual isolation was true, then there must exist ways and means to increase or decrease this isolation at will by the infiltration of fluids. That was simpler than to investigate why, in some cases of edema of the skin, the pain on introducing a needle is less than usual, and, in others, stronger. What is most obviously indicated was to determine the saline contents of such edematous effusions, which proved that the anesthesia of the swollen skin depended on an abnormally low amount of salt present, while the hyperesthesia was caused by unusually high percentages of sodium chloride. And this observation was immediately confirmed by personal experiments. Welts in the writer's skin produced with a .2% saline solution were anesthetic; others from a 1 to 2% solution were painful, while physiological solution produced no disturbances or sensation."

Equally interesting is the vibrating theory of nerve function, which presumes for all nerve tissue a certain degree of rapidity of vibration for functional activity, and is thoroughly compatible with the theory of a quantitative increase of stimuli necessary for the production of pain. This vibratory theory deals more with the transmission of pain than with its cause. There is much to prove this theory, both anatomically and physiologically. Many points in the structure of nerve cells is decidedly suggestive that these

cells or their numerous processes are in a state of active vibration at least during functional activity.

We know that all matter in the universe is in constant motion, nothing is ever at rest, organic or inorganic. Even the densest rocks are constantly undergoing a molecular readjustment. This rule applies also to all cells which go to make up animal life. Motion never ceases in any kind of matter; in animals after death the kind of motion may change, but no kind of matter is ever at rest. It is this unceasing motion which contributes to bring about the constant changes which are occurring in the world about us through the progress of time.

Nerve function or nerve force is very closely allied to electricity with which all animal bodies are charged. Galvani first demonstrated the electric current in the sciatic nerve of the frog. Since then it has become an accepted fact that all animal tissue was capable of producing electric currents and that electric and nerve currents obey the same general laws. (Helmholtz, Humboldt, Dubois-Raymond.)

Electricity is capable of exciting the function of nerves. Applied to a motor nerve, muscular contraction takes place; applied to the cheek, taste is excited; over the forehead, light is produced, and when applied to the ears, sound is heard.

Humphries, in quoting from Abrams, states: "Artificial electric stimulation of nerve fibers corresponds most nearly to their natural excitation, and we, therefore, assume in our present state of knowledge, that nerve force and electricity are identical."

If electricity is a form of motion and moves along wires and nerve currents obey the same general laws which govern electric currents, we are probably not far wrong in presuming that all nerve function is a special kind of motion which takes place in nerve tissue. We do not mean the constant molecular changes which are constantly taking place in all tissue, and have to do with repair and growth, but a special vibratory motion which takes place during functional activity and is stilled or lessened during rest.

If this be accepted and nerves (their atoms or ions) be in a constant state of vibration, an alteration or change in this vibration affecting the conductivity or resistance may make itself known to our consciousness by various sensations. We know that many

of these sensations which are known to our senses as sound, heat or light, are various degrees of motion. Sound means a vibration of 36,000 per second; heat, 18,000,000 per second; while 462,000,000,000 vibrations, per second, produce light. Different colors are due to different rates of vibration. Violet is the highest degree of vibration which we can appreciate, 733,000,000,000 per second.

Any disturbance which may bring about a readjustment of the nerve elements, causing altered conductivity or resistance, may produce abnormal sensations; any stimuli able to increase these vibrations beyond the normal limit producing pain, and when able to lessen or alter them other sensations occur, a diminution or complete stilling of the vibrations producing anesthesia; thus, heat, which is motion when increased beyond a certain point, causes pain; and cold, which is the absence of motion, when lowered to a certain degree by diminishing or stilling motion, produces anesthesia. This vibratory theory explains why nervous or neurotic individuals, with highly active and impressionable nervous systems, stand pain so poorly, and why the phlegmatic, with sluggish and inactive nervous systems, stand it comparatively well.

Some observers, accepting this vibratory theory, have claimed that pressure, by bringing about an altered conductivity or resistance, producing an alteration in the nerve cells or in the nerve currents, produced sensations of pain, and have claimed that all pain is pressure; thus, headache, toothache, burns, inflammations, malaria, etc., by irritating the cells, causes them to swell, and this increased pressure causes pain. Stasis is a form of pressure; this, however, is not always felt at the point of pressure, but may be referred.

This theory, as pointed out by Humphries, is thoroughly compatible with the action of many agents used to control pain or produce anesthesia; thus, general anesthetics paralyze the higher centers, narcotics numb them or lessen their activity; and local anesthetics paralyze the nerve fibers or end organs with which they come in contact. Many agents act in a mechanical way, thus external heat or cold, a mustard poultice, massage, electricity, etc.; these may act by drawing the blood to the surface or stimulating the circulation, thus relieving the stasis or pressure at the effected point. This theory has many advocates and is one of the most rational advanced.

The difference noted in the rapidity with which painful and tactile impressions travel, and spoken of elsewhere, is not at all incompatible with the theory, for pain being an abnormal sensation, greater resistance may be offered to the transmission of the more violent and abnormal vibrations.

In connection with the theory that motion of nerve tissue is necessary for function, may it not be that, in producing anesthesia by infiltration, particularly when using sterile water, that the swelling of the cells induced by their taking up water (and in this case giving off salts) may so interfere with their vibration as to prevent the transmission of painful impressions.

This angelic effect of the absorption of hypotonic solution does not necessarily contradict the above-mentioned views of some authors, for, as shown elsewhere, as originally proved by Schleich, it is only hypotonic solutions which possess this power; isotonic solutions when injected have no effect upon sensation, and hypertonic actually cause pain.

PHILOSOPHY OF PAIN.—Numerous writers and thinkers have devoted much time to the philosophy of pain, and much that is worthy of the time and attention of physicians has been written on this subject.

Plato and Aristotle have well said that neither pure pleasure nor unqualified displeasure exist in man. Both feelings are mixed in unequal proportions by the subtle act of nature, and the definite impression on our consciousness is a resultant in which one or the other predominate. Pain is due to exhaustion, destruction, or rupture of sensitive tissue; an increase of expenditure with insufficient reparation produces fatigue and positive pain. All suffering is partial death which comes upon some organ or function.

"Pain is not to be reckoned as abnormal but as nature's protest against the abnormal. It is her finger sternly pointing the other way that she means us to go." (Crutcher.)

The more consideration which we give to the subject the more convincing becomes the proof that the painful sensibility of the skin is a benevolent provision, making us conscious of those injuries which, but for this quality of the nervous system, would bruise and destroy the internal and vital parts which have little sensation. In the first place, we must consider that if a sensibility similar to that of the skin had been given to these internal parts,

it would either have remained unexercised or have made us painfully conscious of our normal organic functions. Had they been made sensible to pricking, burning, etc., they would have possessed a quality which would never have been useful, since no such injuries could reach them, or only after amply warning had been given through the sensitive skin, and it would further inflict needless and unnecessary pain. The deeper parts have different kinds of sensations, but a limited degree of sensibility, for they may be injured without injury to the skin, as in fractures, etc.

"If we could imagine beings to have ever been created by any sport of Nature, whose pleasure was connected with injurious actions and their pains with useful ones, they must have died out speedily by virtue of the vice in their constitutions. * * * All suffering is a partial death which comes upon some organ or function." (Fouillee.)

To suppose that we could be moved by solicitations of pleasure and have no experience of pain, would be to place us where injuries would meet us at every step and in every motion, and, whether felt or not, would be destructive to life. To suppose that we were to move and act without experiences of resistance and of pain, is to suppose not only that a man's nature be changed, but the whole of the exterior nature also. There must be nothing to bruise the body or hurt the eye, nothing noxious to be drawn in with the breath. In short, it is to imagine altogether another state of existence. Pain is the necessary contrast to pleasure; it ushers us into existence or consciousness; it alone is capable of exciting the organs into activity. It is the companion and guardian of human life.

In a broader conception of the statement, we know of no instance of pain being bestowed as a source of suffering or punishment, purely, without finding it over balanced by great and essential advantages and without being forced to admit that no happier contrivance could be found for the protection of the body.

The Etiological and Epidemiological Irregularities of Cerebro-Spinal Meningitis. With Some Remarks as to Carriers.*

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An epidemic of cerebro-spinal meningitis is always interesting to the physician, and especially at the present time, by reason of the prevalence of the disease in the neighboring State of Texas. This in itself would be ample justification for calling attention to certain etiological and epidemiological features of the malady.

Cerebro-spinal meningitis is an infectious and contagious disease occurring sporadically and in epidemics, caused by the *diplococcus meningitidis*, characterized by inflammation of the cerebro-spinal meninges and a clinical course of great irregularity. Owing to the wealth of nomenclature with which the disease has been burdened, there has arisen a most varied, and often erroneous, descriptive symptomatology. In short, the malady is a specific infection in which the chief lesion is an inflammatory condition of the membranes of the brain and spinal cord. The pathological changes are associated with the presence in the tissues of the meningococcus, a micro-organism first demonstrated by Weichselbaum, who gave it the name of *diplococcus intracellularis meningitidis*.

Owing to the importance of the subject I believe a brief historical survey of the disease and some of its previous epidemics will not be untimely. The historical and geographical interest which attaches to the disease should appeal to us for many reasons, foremost among which is that this section, hitherto, comparatively immune since 1850, cannot expect always to escape outbreaks.

The disease was first recognized in the early part of the nineteenth century. In the *interim* there have been two widespread outbreaks in Europe and three in the United States. Hirsch, however, in his Handbook of Geographical and Historical Pathology, divides the history of epidemic cerebro-spinal meningitis into four periods. In the first period, 1805-1830, the disease occurred in the form of isolated outbreaks in different parts of

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Europe, and, to a greater extent, in the United States. In the second period, 1837-1850, the disease assumed a much wider geographical range, there being widespread epidemics in Denmark, France, Italy, the northern African coast and the United States. In the third period, 1854-1875, the disease was widely disseminated through a great part of Europe, the adjacent portions of Asia, the United States, and some parts of Africa and South America. The fourth period, 1876-1884, is described as "a return to merely casual epidemics, or to more or less considerable groups of cases here and there within its former area of distribution."

Within the past two decades the behavior of the disease has been similar to that displayed in the fourth period. In quite recent years the disease has exhibited signs of renewed activity, and Jaeger, writing in 1899, called attention to an "epidemic period of this disease," and he commented on its wide prevalence throughout the United States, Germany, France and Greece. At about the same time Osler in an address before the West London Medico-Chirurgical Society called attention to the renewed spread of the disease in the United States, and described it as the fourth successive "wave" or epidemic period of the disease in the United States. He also pointed out that the fourth epidemic period, as described by Hirsch, did not affect America to any extent.

As regards wideness of diffusion and severity of outbreaks the United States has in the past been more repeatedly and extensively visited by cerebro-spinal meningitis than any other country. During the four epidemic periods the States of Georgia, Florida and Arkansas remained comparatively free from the disease.

In the year 1850, at the time of the second epidemic period, New Orleans was visited by quite an outbreak. Joseph Jones, a member of this Society and the South's most illustrious medical litterateur, in his medical memoirs deals with the subject entertainingly and instructively. The *NEW ORLEANS MEDICAL AND SURGICAL JOURNAL* of that time contains several interesting references of the disease. The city was also in the throes of a most deadly epidemic of cholera about 1850. It is the belief of the writer, though he has no authority for saying so, that the disease (cerebro-spinal meningitis) was brought into New Orleans and the South by the tide of Irish immigration which was then at its height as a result of economic conditions in Ireland. It is

worthy of note that during the latter part of the second epidemic period and the early days of the third epidemic period, there was much financial distress and poverty existing in Ireland, and the workhouses of Dublin, Belfast, Bray and Cork were full of cases of cerebro-spinal meningitis.

The first epidemic period of the disease in the United States had its origin in the vicinity of the New England States; the second and third epidemics in the Southern States. In the years 1856-1857 the disease broke out almost simultaneously in the States of North Carolina and New York, and, several years later, during the Civil War (1861-1863), spread widely. The disease covered nearly the whole area of the United States and did not fully subside till the latter part of 1874. Osler, in a measure, disagrees with the accuracy of Hirsch's views as to the prevalence of the disease in the United States during the war period. The frequent and wide dissemination of the disease over the American continent remains one of the most striking and peculiar epidemiological features of the disease.

Facts concerning the etiology and epidemiology of cerebro-spinal meningitis are in a chaotic state of variance. Cerebro-spinal meningitis is a malady which is not always easy to demonstrate from other pathological conditions of the brain, the spinal cord and their coverings. The disease has frequently been confused with conditions to which it bears not the least possible resemblance. In certain areas the disease often fails to be recognized because the microscope is not employed as a diagnostic aid. Bacteriological confirmations of the diagnosis of cerebro-spinal meningitis has only recently become possible; but, unfortunately, the bacteriologist and the means of making bacteriological inquiries are not always at hand.

Its known area of prevalence, however, is a broad one to-day and is daily becoming wider. With the possible exception of South America, it is found in every quarter of the globe. Between the two hemispheres there exists a marked, and to this day unexplained, variation in the area of prevalence of the disease. The disease is absent in Iceland and the Farøe Islands, but is quite prevalent in the regions of the Alaskan gold fields, which are on the very borders of the Arctic circle. In the south it is frequently met with in Southern Africa, but is rarely seen in Australia.

The name given to the disease expresses one of its most interesting characteristics—its tendency to occur in the form of epidemics. The extent and intensity of these epidemics vary widely in certain communities. Very often the term “epidemic,” as used in connection with the disease, is quite inappropriate. This is especially so where the outbreak is of a limited character—the disease attacking but a small number of people. Single isolated cases should not be diagnosed as epidemic types of the disease. The epidemicity of the disease presents several curious and irregular features. Epidemics of cerebro-spinal meningitis do not steadily pass through a country from one end of it to another, but occur in the form of a number of isolated cases or outbreaks. These separate outbreaks display little or no association with each other, and it is, indeed, very difficult to trace or establish any apparent connection between them. In brief, the disease spreads from one center of origin or activity either by contiguity or on special lines of traffic or other mode of distribution. It breaks out at widely separated and apparently disconnected foci, in separate towns, villages or tenements; and it spreads in the same irregular manner. As regards time the disease exhibits no definite course. A maximum degree of prevalence may be followed by a speedy decline to extinction. Correctly speaking, an epidemic of meningitis does not steadily ascend to a maximum and then show a gradual declination, but, as a rule, pursues a most irregular course, crops of fresh cases appearing at intervals of uneven duration.

Our views as to the contagiousness of many infectious diseases have suffered quite a change, but none more so than in the question of cerebro-spinal meningitis. The most important contribution to our knowledge of cerebro-spinal meningitis is the knowledge that the causative organism, the *diplococcus intracellularis meningitidis*, has its natural habitat in the nose and throat; and, secondly, that the disease is spread through the medium of an intermediary or healthy carrier.

Before going further into a discussion of the infectiousness and contagiousness and modes of propagation of the disease, it might be well to consider at this juncture the pathological characteristics of the carrier. The *diplococcus intracellularis meningitidis* first obtains lodgment in the throat or the naso-pharyngeal cavi-

ties—more frequently the latter; these localities represent the original sites of infection and proliferation. As to the route the infection pursues from these points to the meninges, there is a diversity of opinion. A consideration of these differences will be of assistance, and for this reason will be treated briefly.

Exposure of the sinuses, by splitting the skull sagittally, fails to reveal to the naked eye any evidences of a direct extension of the mischief from the throat or nose to the cranial cavity. Some observers believe that the infectious process starts from the throat or the nose and through the cribriform plate makes its way to the base of the brain. For many reasons the theory of direct extension of this disease is not tenable, the foremost of which is that, were the process by direct extension from the nose or throat, the lymphatics would be the route traversed. As an argument against this conclusion let us review some of the primary features of scarlatinal infection. Scarlatina is often associated with severe streptococcic infection of the throat, and the organism, the *streptococcus pyogenes*, giving rise to this infected throat does so *via* the lymphatics, but practically never gives rise to a meningeal condition. Again, the cord suffers much more severely from the infection than does the base of the brain, demonstrating that cerebral damage is always secondary to that of the cord. It has been suggested that the *diplococcus intracellularis meningitidis* is ingested and reaches the lymph stream by way of the bowel. Those inclined to the "bowel infection" theory call attention to the great swelling and congestion of the mesenteric glands in meningeal conditions.

In view of the foregoing it is evident that the *diplococcus intracellularis meningitidis* travels from the nose and throat to the cerebro-spinal canal *via* the blood route. In many cases the organisms have been found in the blood. The *diplococcus intracellularis meningitidis* first invades the blood stream, and then localizes in the meninges because of its specific affinity for meningeal tissue. This specific affinity for meningeal tissue, however, would seem to be limited to human tissues, for all attempts to produce meningitis in animals by inoculations of the *diplococcus intracellularis meningitidis* into parts more or less removed from the central nervous system have been unsuccessful. The organism has been obtained in pure culture from the pericardium, pleura, joints and spleen. In two cases the

diplococcus intracellularis meningitidis gave rise to a malignant endocarditis. The organism has also been obtained from the urine of a patient suffering from the disease.

The blood invasion probably occurs in the following manner: The onset of the disease is insidious. In many cases there is throat infection associated with severe inflammatory reaction. Frequently the inflammation is so severe as to cause a membranous exudate not unlike that of diphtheria, and frequently mistaken for this condition. In this exudate rests the *diplococcus intracellularis meningitidis* enmeshed or lying in the leucocytes. The lymphatic absorption of such exudate might very well be accomplished by a blood invasion of the organisms free or within the leucocytes. Every invasion of the blood, however, is not followed by an infection of the meninges; it is usually necessary that there be some other factor leading to a lowering of tissue resistance or to an increase in the virulency of the organism. This predisposing factor may in some instances be due to trauma.

Another condition having a bearing on the selection of the cerebro-spinal canal as the seat of the infection, may be the properties of the cerebro-spinal fluid and the blood serum. The probability of infection would be regulated by the bacteriological properties of the cerebro-spinal fluid and blood to the *diplococcus intracellularis meningitidis*. Very frequently the blood serum will exhibit a certain bactericidal action to the causative organism, while the cerebro-spinal fluid will fail to show the slightest evidence of bacterial antagonism. This difference between the blood serum and the cerebro-spinal fluid in regard to those necessary factors of immunity would naturally point to the cerebro-spinal canal as being a *locus minimæ resistantiæ*. Added to this the specific affinity of the *diplococcus intracellularis meningitidis* for meningeal tissue, and it is not difficult to understand the manner in which the infection arises.

As to the controversy regarding the etiological status of the pneumococcus in cerebro-spinal meningitis a word or two is necessary. Investigations of a most thorough character have relegated the pneumococcus to a subordinate position until it now seems that it very rarely selects the meninges as a primary point of attack; however, it may often invade them after having secured a foothold in some other tissue. As to epidemics of meningitis the pneumo-

coccus may be left entirely out of consideration, there being but one epidemic yet studied bacteriologically which certainly was not due to the meningococcus, and in this the culpable organism seems to have been the *streptococcus mucosus*. The positive diagnosis of primary meningitis depends upon the demonstration of the specific organism in the cerebro-spinal fluid which seems not to be a difficult matter if necessary precautions are observed.

Reverting to the mode of transmission and the role the carrier plays in the spread of the disease, a great deal of our knowledge is based on the history of recent outbreaks of cerebro-spinal meningitis. The disease is undoubtedly transmitted directly from person to person, for the *diplococcus intracellularis meningitidis* is of such low vitality that it quickly succumbs to drying, sunlight and other noxious influences. Because of its virulency individuals suffering from the disease are decidedly restricted in their sphere of potential pathogenicity, and as only a very few of those who acquire the organism are sensitive or susceptible to it, the perpetuation and dissemination of meningitis must depend upon the healthy carriers, who transmit the *diplococcus intracellularis meningitidis* from one to another until an impressive subject is reached—the result is infection.

The number of persons who are thus made carriers during an outbreak of meningitis is far greater than the number of cases of meningitis. Nearly one-fourth of all individuals residing in the immediate vicinity of meningitis cases act as meningococci carriers, harboring the germs in the respiratory passages without displaying any evidence whatever of disease or inconvenience. In apparently the healthiest of subjects meningococcal organisms, in their maximum degree of virulency, have been isolated, and even the saliva has been found contaminated with the *diplococcus intracellularis meningitidis*. Only occasionally do these bacterial carriers present signs of a naso-pharyngitis, or symptoms of a mild meningococcic infection. In carriers the germs are rarely found in the anterior part of the nasal fossæ or in the regions of the tonsils, but they are abundant in the posterior part of the nasal chambers and in the rhino-pharynx. Other persons equally exposed as carriers, but not inhabiting the same dwelling, rarely become infected. Aside from epidemic outbreaks the germ is seldom discoverable in healthy persons; there are, however, occasional

persons who, once sheltering the *diplococcus intracellularis meningitidis* in the naso-pharynx, carry it permanently, thus perpetuating the disease. These chronic carriers are especially active during the periods intervening between epidemics. It appears that the *diplococcus intracellularis meningitidis* can readily obtain a foothold on the mucous membranes of the majority of individuals, but with only a comparatively small proportion of these subjects is it able to invade the tissues and manifest its pathogenic effects.

[Recent observations as to the role played by insects and certain of the lower animals show them to be quite formidable agents in the dissemination of infectious diseases. After reading many of the brilliant contributions by that martyr to science, Ricketts, one is quickly struck with the close analogy, in many instances, of epidemic cerebro-spinal meningitis to Rocky Mountain spotted fever and the typhus fever of Mexico (Tabardillo). One who has seen Rocky Mountain spotted fever, typhus fever (Typhus exanthematicus) and epidemic cerebro-spinal meningitis cannot fail to be impressed with the similarity of the three conditions along clinical, anatomical and immunological lines, at least in certain essential respects. From the standpoint of a common bacteriological cause, however, there exists no relationship save that the organism in all three diseases is a diplococcoid body.

In drawing a comparative picture of the above disease, mindful of the dangers of analogies and generalizations, the object in view is to direct attention to certain etiological factors, very often neglected, in the spread of cerebro-spinal meningitis. With the knowledge that the tick is the agent through which man is affected with spotted fever, and the louse the intermediary agent in the diffusion of typhus fever, one naturally inquires if there may be not some similar agent also responsible for the spread of cerebro-spinal meningitis. Owing to the geographical contiguity of Texas to areas of infection of both spotted and typhus fever, the tick and louse might be viewed with suspicion. The fly has been mentioned as a probable intermediary in the dissemination of the disease. Our investigations should be pushed further. The flea, the fly, the bed-bug, the roach, the ant, and the rat should have their etiologic status definitely established as concerns this disease.

Temperature has but a negligible influence on the production of the disease. It can endure equally well in tropical, temperate and

sub-arctic climates. The view heretofore held, that one of the most important determining causes of an outbreak was a low temperature, we now know to be erroneous. A disease which can become epidemic in the Sudan, and next be heard of in Jamaica, cannot in anyway be dependent for its causation upon absolute cold. In 1887 Hirsch wrote: "Hitherto it (cerebro-spinal meningitis) has been really confined to temperate and sub-tropical latitudes; it has not penetrated into the cold zone except to a very slight extent; while the tropics and the whole of the Southern regions have escaped it altogether." The same observer defined the limits of the disease in the Western Hemisphere from 45° North (Montreal, Canada) to 30° North (Mobile, Alabama); in the Eastern Hemisphere 63° North (Sweden) to 30° North (Jerusalem). To-day these observations would be totally at variance with the facts. Within the last two decades cerebro-spinal fever has invaded regions where formerly it was unknown. As to its exact relationship, it may be stated that while cold is not absolutely necessary for its production, a relative degree of cold seems to be of some importance. In other words, cold contributes to, but cannot be, the sole contributory or predisposing cause of the outbreak. The larger number of epidemics have begun in winter or spring, and, further, the attack appears in individual cases to be determined by exposure to cold. But, again, in many of the coldest winters there have been no outbreaks, while recrudescences of epidemics have been recorded in very mild weather. That cold has more or less influence on the disease seems to have been well borne out in the behavior of the present epidemic in Texas. From December 1, 1911, to the present writing (January 22, 1912), the weather in Texas has been extremely cold. The cold has not been continuous in the sense of lasting weeks at a time, but a series of cold waves accompanied by heavy rains. Between these series of cold waves, in which the disease became milder, the disease would display a sudden spurt and the number of cases began to rise.

As to its relationship with other diseases the facts are imperfectly known. It is independent of malaria. Epidemics of cerebro-spinal meningitis have coincided with or followed epidemics of other specific infections, such as typhus and cholera. As to cholera I would again call attention to the epidemic of cerebro-spinal meningitis of 1850 in New Orleans when cholera also raged. There never

has been, however, any definite connection established between these diseases. As to the similarity of the disease to spotted fever and typhus, previously mentioned, there are lacking certain diagnostic features which could establish a definite and constant relationship. However, there are certain striking features of resemblance which open interesting fields for research.

Concerning the question of immunity there is a dearth of literature, and whatever information we have on the subject is unreliable. There are on record one or two cases in which the disease has affected the same person twice.

Elevation above the sea level or geographical formation does not influence the distribution of the disease to any appreciable extent. Dampness or wetness of the soil has only an indirect influence on the disease in that it renders the individual the more susceptible to the virus.

All races have suffered from cerebro-spinal meningitis, but it is believed that negroes are particularly susceptible to the disease. For this racial susceptibility many explanations are offered. The habits of the negro, together with his exposure to infection, pathologic taints, and low hygienic environments seem to offer the most reasonable explanation for the frequency of the disease in the race. The broad, flat and wide open nose of the negro also plays its part from a predisposing anatomical standpoint. In children of school age, in large cities, the incidence of the disease among negroes is always higher in proportion than that among white children. Possible elimination of the disease in the future may flow from the efficient system of medical inspection which has lately been inaugurated by the school authorities. The inspection of nasal and oral cavities of school children will lead to the removal of many disease-creating conditions, thus improving the general health and diminishing the susceptibility to disease. School inspection also leads to the detection of carriers. As a rule, the negro does not take kindly to educational health reforms of any character, thus rendering himself at all times a fertile soil for infection.

As to age, it selects principally children or persons of early adult life. In attacking adults the disease seems to have a particularly selective action for those individuals who are in a state of fatigue or exhaustion from some unusual or excessive degree of labor or physical exertion, or exposure to wet and cold.

The disease has no special predilection for one sex.

Among the conspicuous determining factors of an epidemic of this disease, the hygienic environment of the individual plays a most important part. As to conditions of life, it may be that privation, overcrowding, bad sanitation—in brief, the circumstances of the poverty-stricken—favor the spread of the disease, but they have never been shown to form an absolute cause thereof, with the possible exception of overcrowding.

The disease exhibits a tendency to become epidemic in the poorest quarters of cities. Defective plumbing in and about drain pipes, water closets and urinals, and neglected cesspools appears to be quite a potent etiologic factor in the disease. By many physicians the disease has been termed the "tenement snatcher." While the ravages of the disease are, as a rule, confined to the poorer classes, it can also occur and does occur in the highest grade of society.

Reverting now to the role which may be played by the flea, fly, ant, louse, bedbug, roach and rat in the dissemination of this disease, one has only to consider under what circumstances these pests are found; again, recall the conditions which favor the propagation of the disease. The natural environs of the flea, fly, louse, bedbug, ant, roach and rat is among the poor, the ignorant and the filthy; and what condition typifies this state of affairs better than the tenement dweller or the negro in a rookery or ramshackle cottage.

I really believe that the fly, flea, louse, bedbug, ant, roach and rat act as intermediary agents in the diffusion of cerebro-spinal meningitis, just as the *pulex cheopis* does in plague and the mosquito in yellow fever or malaria. For the eradication of the disease there must be inaugurated a campaign of private and public measures of hygiene.

Many of the towns and cities of the West in which the disease is to-day prevailing, are of boom growth, and it is principally in these places that the disease has exhibited unusual severity and virulency in numbers attacked. Small communities in the West, aping the ways of large cities, are particularly filthy. Cleanliness is subversive to the shine of the dollar, and once disease gains a foothold it is extremely difficult to eradicate. The disease in Dallas and Fort Worth, Texas, has appeared principally in the negro district, where filth reigns supreme.

Aside from the peculiarities of the disease cerebro-spinal menin-

gitis, as a whole, there are certain features of the disease in Texas which are worthy of consideration. Hirsch has quoted a number of instances in which the movements of troops have seemed to contribute to the spread of the disease. Is it possible that the great number of troops that mobilized on the Mexican border of Texas last spring and summer had any bearing, direct or indirect, on the disease? I mention this only to emphasize the observations of Hirsch many years ago. That the troops have exerted any influence on the disease in Texas I do not believe, as the condition prevails for the most part in North Texas, while the troops were confined principally to South Texas. But I do believe it is possible that the disease might have been imported into Texas by escaping political refugees of Mexico and the horde of adventurers which infested Texas shortly after and during the time of the recent revolution.

Texas and the West suffer severely from dust storms, and it is thought that this may have some bearing on the diffusion of the infectious agents through the air. Dust plays no part in the dissemination of the disease except that it acts as an irritant to the nasal mucous membrane and may to this extent be considered a predisposing agent.

Having reviewed some of the etiological and epidemiological irregularities of the disease, the question of prophylaxis will engage our attention.

To the present time there has been discovered no means of causing the disappearance of the *diplococcus intracellularis meningitidis* from the respiratory passages, and especially the naso-pharynx, of the carriers. There are certain measures within our power which, if rigidly observed, would tend to limit the extent and severity of epidemics. To rob this disease of its horrors—the high rate of mortality and pitiful post-meningeal sequelæ—means a persistent educational campaign on the broadest possible lines; to carry the educational campaign to a successful conclusion, it is essential that a few primary facts be recognized.

First: Earnest co-operation between the people and the health authorities in the enforcing of all necessary health regulations should be secured.

Second: The detection and isolation of all apparently healthy germ carriers, the actual propagators of the disease, is essential.

Third: Efforts should be directed towards rendering these apparently healthy germ carriers harmless.

The work of the health authorities would embrace the ordinary sanitary control of the contagious diseases, such as diagnosis, notification, isolation, or removal to a contagious disease hospital, fumigation and disinfection. Quarantine measures to check the spread of this disease are not only absurd but unscientific.

Household inspection by competent officials, to ascertain the sanitary conditions of back yards, alleys and outhouses, would prove beneficial to the health of the community in various ways. Tenement inspection should be conducted by those especially trained in this branch of service. Defective plumbing and insufficient toilet requirements should be made the subject of special investigation and correction. In rural districts soil pollution should be inquired into closely. Particular efforts should be directed to the extinction of the flea, fly, louse, ant, bedbug, roach and rat in living quarters.

Garbage disposal should be conducted under the supervision of the health authorities working in conjunction with the Department of Public Works. Street cleaning and paving should be brought up to the highest possible state of efficiency.

Circulars of information dealing with the prophylaxis of the disease and the dangers of carriers, should be distributed to the pupils of public and parochial schools, and the children should be impressed with the necessity of bringing them home for their parents also to read. In addition, these circulars of information should be distributed through the various industrial plants of the community or those places where the number of employees is large.

Medical inspection of school children should be thorough and efficient. A particularly distressing feature in summarizing the beneficial results of medical school inspection is the antagonistic attitude displayed by those in charge of private and parochial schools to this most necessary educational, hygienic and health-conserving measure. Some provisions for the medical inspection of the pupils of private and sectarian schools should be made. During epidemic periods rhinological and laryngological examinations in schools, orphanages and like institutions should be conducted by specialists in those lines. An earnest and scientific co-operation between the medical school examiner and the bacteriologist would promptly lead to the detection of carriers among

school children. This alone would bring about the isolation of many carriers. Lectures on oral and nasal hygiene should be delivered to the pupils of public and private schools and the inmates of all public institutions. The children should be given practical demonstrations as to how to brush the teeth, blow and clean the nose, and, if necessary, to syringe that organ and to gargle and rinse the mouth. Inquiries should be made every morning of all school children as to any illness existing at home; by so doing it is often possible to check the spread of many contagious diseases. School teachers should be acquainted with the elementary outlines of the disease in order that they might impart to their pupils certain prophylactic principles.

Popular lectures to the public on the same plan as that followed in San Francisco during the recent plague and in New Orleans during the yellow fever epidemic of 1905 would also prove fruitful of results.

The scope of the powers of the health authorities should be so regulated that the exercise of their authority might be amplified at any time according to the demands of the situation.

A most important, and probably the weightiest, question in the prophylaxis of cerebro-spinal meningitis is what to do with the carrier once he is detected, always remembering that the carrier has certain recognized rights; and, secondly, what means of prevention are necessary for the individual to avoid becoming a carrier.

Once a carrier of the disease is recognized as such, he should be placed in care of the health authorities for observation and treatment. During this period he should be treated by a throat and nose specialist, assisted by a trained bacteriologist. It should be the aim of the attending physician to bring about a condition of bacterial freedom in the regions of the throat and nose. By some means the *diplococcus intracellularis meningitidis* should not only be turned out of its natural habitat—the respiratory tract—but also completely extinguished. All carriers, especially the chronic, should be inoculated with the anti-meningococcal serum. The results of the bacteriological examinations should be the gauge as to the efficiency of whatever treatment might be adopted. In cases of chronic carriers we should endeavor to restrict their sphere of activity and impress upon them their danger to the public and

instruct them accordingly. Special directions as to spitting, coughing and sneezing should also be a part of the instructions to carriers. Fomites, such as handkerchiefs, spoons, cups, and so forth, which have become contaminated by carriers, may infect susceptible persons, and should be disinfected or destroyed.

To avoid becoming a carrier oral and nasal hygiene should be made a part of the daily routine. All faucial and nasal irritation should be inquired into and properly treated. One way to avert the disease is to keep the teeth well brushed, the mouth and throat as clean as possible, the nasal cavities clear and clean. Do not hesitate to gargle or rinse the mouth with a good oral antiseptic; have no fear of a tooth brush; and display no antipathy to a nasal douche, if one is necessary, and you will in all probability minimize the chances of contracting cerebro-spinal meningitis when the disease becomes epidemic in your section.

Louisiana State Medical Society Proceedings.

EDITED BY PUBLICATION COMMITTEE,

DR. JOSEPH D. MARTIN, Chairman, 141 Elk Place, New Orleans, La.

F. W. PARHAM, of New Orleans, read a paper entitled

Enterostomy—a Life-Saving Measure.

Intestinal obstruction has long been one of the *bêtes noires* of surgery. In spite of all the advances in technic it still claims a high mortality. This is due largely to the fact that the condition, unlike appendicitis and gall bladder affections, has not yet been removed from the domain of medicine and transferred to that of surgery, but a not inconsiderable part of this mortality must still be laid at the door of the surgeon himself. It is true that a high percentage of cases of intestinal obstruction when first seen by the surgeon are *in extremis*, but even some of these should get well. This mortality will be much reduced as the diagnostic methods of the medical clinician become more prompt and accurate, so that the sufferer may be earlier subjected to operative intervention—

that is, at a time when his condition may justify radical procedures for his relief, but it may be still further reduced by simplifying the operative manipulations of the surgeon. Indeed, while all surgeons of experience recognize the importance of diagnosis and the necessity, where possible, of removing the cause, it must not be forgotten that radical operation, even where it involves no violent handling of the intestinal viscera, itself develops a risk to life that ranks even with the removal of the obstruction. Treves states that the mortality of the operative treatment of intestinal obstruction has been enormously reduced by draining the proximal intestine. McClure and MacCallum have shown experimentally that complete obstruction of the intestinal lumen will make of it a veritable culture tube. Even the upper part of the small intestine which ordinarily shows very little bacterial content will quickly develop the characteristics of a septic focus. Given such a condition, due to a simple constricting band, which, it may be, can be easily found and cut, thus relieving the obstruction, is the condition relieved and the patient's life surely saved by this apparently radical procedure? Not necessarily, for, depending upon the duration of the obstruction, there will have developed a large amount of toxic products, which may quickly result in a fatal absorption when turned into the intestinal segment below the obstruction. Would it not be better surgery, then, either to bring out on to the abdomen the segment of intestine obstructed and open and drain it thoroughly, or to do an enterostomy before relieving the obstruction? In a case of obstruction of any duration, then, draining of the intestine must be considered as important as the removal of the obstruction itself. Now, when we know that the condition of many of these cases is such when first seen, as not to justify any prolonged search for the obstruction, does it not behoove the surgeon to temporize, contenting himself with a simple enterostomy combined with intestinal lavage, involving little additional traumatism?

Cannon and Murphy's observations on experimentally produced ileus have shown that, whilst even prolonged etherization with exposure and cooling of the intestine gave rise to no noteworthy effects, even the gentlest handling of the stomach and intestine will markedly inhibit peristalsis. Given a patient in the condition of more or less pronounced shock, the result of a neglected obstruction, would it not really be better to leave such a case to his chances

than to subject him to the almost certainly fatal risk of the difficult search among the intestines for an obscure cause of obstruction? If we can, without adding much to the patient's danger, relieve him of his toxemia, a factor of even greater urgency than the obstruction itself, is it not our duty to content ourselves with this and wait, hoping the condition may so rapidly improve as to justify shortly a radical operation?

Herein lies the justification for enterostomy, done either in conjunction with radical operation or as preliminary to it. Treves, it is true, advises against it in all but exceptional cases, calling it "a rough and ready operation, extreme, irrational and blindly advised," but it is the exceptional cases that we may save in this way, cases otherwise doomed to speedy death.

If the condition of the patient justifies it, let the radical operation be done, but if this cannot be done without making his life the hazard, drain and wash out the intestine above the obstruction and wait. Many cases of inflammatory condition clear up quickly when the distended intestine is opened and drained of its toxic contents. The relief of tension and the cessation of the toxic absorption sometimes quickly restore paristalsis by removing both local and central inhibition, and rapid amelioration follows. Often, even in mechanical obstruction, nothing further will be required and the patient recovers.

Take such a case as this, typical of many of those seen by the surgeon:

A man shows the signs of great shock with extremely distended abdomen and giving the history of no movement of the bowels for four or five days, notwithstanding most energetic administration of purgatives. We try ourselves purgative enemas without effect, and quickly decide to operate. The presence of an umbilical or an inguinal or femoral hernia or a sausage-shaped tumor in the right flank or some other palpable cause will sometimes indicate the location and cause of obstruction, and we do the radical operation, but oftentimes we do not know where the obstruction is, and we do not know where to open. We make then a median incision; at once a mass of huge intestine presents, perhaps violently extruding itself through the incision. We find ourselves in a mess and become busily engaged in holding the miserable mass of intestine back. Is it not obvious that the intestine must be reduced in size?

If we keep on searching for obstruction are we not most certainly consigning our patient to death? Clearly an enterostomy is indicated. Why hesitate? We open the intestine and are astonished at the amount of fluid feces that escapes, perhaps not immediately, but generally after a little interval, especially if assisted by warm saline irrigation of the intestinal canal.

The effect is oftentimes surprising, for within a few hours we find the patient practically convalescent. Search for the cause may now be safely made and the condition be permanently relieved. It sometimes happens, however, that the enterostomy has actually removed the cause of obstruction and no further operation is required. This may happen where the obstruction follows operation for ruptured appendix, giving rise to inflammatory adhesions or bands producing compression or kinking. The enterostomy relieves tension, promotes absorption of inflammatory exudates and relieves the obstruction. But even in mechanical obstruction not as yet causing gangrene, the relief may be most safely accomplished in two stages. The objection has been urged with much force to enterostomy that actual gangrene may actually have resulted. The character of the peritoneal fluid will often settle the question, and the surgeon's duty is plain—to find and draw out the gangrenous coil on to the surface and fix it there. If, however, there be difficulty in finding the site of obstruction, it will be far less harmful to do an enterostomy by one of the quick methods, and await improvement in the patient's condition before going further.

I believe the guide in all cases should be the condition of the patient and the duration of the obstruction. If his condition permit, the obstruction should be found and radically treated, otherwise enterostomy should be done. No matter what the nature of the obstruction, enterostomy should be preferred if the patient's condition does not warrant radical intervention. But the ease and safety of the operation must not be made the excuse for avoiding a responsibility which the surgeon should shoulder. Enterostomy must be reserved for the exceptional cases where relief must be quick and no radical procedure is justified. The indication being clear, we must do the enterostomy in the simplest and safest way. Several methods have been suggested.

The Paul or Mixer tube is a very convenient and safe way

of doing a quick operation, but a simple tube may be employed retained in the intestine with a simple purse-string suture, as in gall bladder technic, or after the plan of Kader for gastrostomy. The Murphy button has been used very satisfactorily by Stewart, one-half being in the intestine, the other in a rubber tube of suitable caliber. When the two valves are clamped the point is water tight. In a case where resection becomes advisable, the intestine should be clamped and cut through, and either a Paul or Mixer tube, or Murphy button, with rubber tube connected with one-half tied in the proximal end. The clamp being then removed the gut may be allowed to empty into a receptacle on the floor whilst the operative work is continued. This being done, the half of the button (if this has been employed), is unscrewed with the tube attached and the distal end with the other half of another button previously inserted brought up and clamped. The work is then complete.

A very convenient means of doing the enterostomy is with an umbrella catheter. This may be quickly inserted and a purse-string being applied or two or four sutures about its stem it is safely fixed in place and can be used as a tractor to keep the bowels in contact with the peritoneum. Two or more of these may be employed in a case. If the ends of the purse-string are brought through the peritoneum and tied, the wound will quickly close when the catheter is subsequently withdrawn. I have been much pleased with this little device and am sure it has been the means of saving life in at least three or more cases.

These were cases marked by great tympany following operations for suppurative appendicitis. The operated wound was simply reopened, a presenting coil pulled up, and the catheter inserted without drawing the coil outside. Relief was prompt and progressive. Objection urged against enterostomy high up in the small intestine is largely obviated by the use of this umbrella catheter, as no escape can take place and the wound easily closed when no longer needed.

DISCUSSION OF PAPER BY DR. PARHAM.

DR. WILLIAM M. PERKINS, New Orleans: Too many operations have been done and are being done with the idea of curing the condition by a certain operation, according to a specific technic,

although it be a question whether the patient will stand it and get well. It is very often the best kind of surgery to decide how much these patients can stand and stop the operation at some suitable point, to be completed as a second or third operation. While it must be gratifying to complete the operation indicated at one sitting, it is very often fatal. In many severe abdominal cases the thing which threatens the patient's life is intestinal obstruction. The operator is quite often induced not only to relieve that condition which is threatening the patient's life, but also to go on and do a radical operation to remove the disease which caused the obstruction. The procedure suggested by Dr. Parham's paper allows the operator to relieve the life-threatening symptoms and allows his patient to get in a seventy-five per cent. better condition for complete operation later on. The principle of doing in two stages what is too often done in one stage is well illustrated in this case Dr. Parham has mentioned. Two stages often give a life-saving operation, where one stage would give a dead patient and a funeral.

DR. E. DENEGRE MARTIN, New Orleans: I hope the members will study the paper of Dr. Parham very carefully when it is published; the results are so remarkable that I wish to emphasize the importance of this operation, even though we fail in some cases. The procedure is simple, and I sincerely trust that when occasion presents the members will give it a trial.

DR. L. G. STERLING, Baton Rouge: I would like Dr. Parham to make it plain to us how to get the umbrella catheter out after the wound has closed around it.

DR. PARHAM (closing): I think the only thing left for me to do, Mr. Chairman, is to tell how to get the umbrella catheter out. It is a simple matter. Frequently all you need to do is to pull on it and it will come out. If it does not come out, cut the catheter off short, holding it with a pair of forceps so that it will not drop into the intestine; and with a probe in the catheter push until the umbrella is sufficiently reduced to come through the wound. I want to lay stress on the one point that relief of the intestinal obstruction is not the only surgical indication, nor perhaps the most important surgical indication. It is very important to relieve the toxemia which has already progressed to a very serious stage. Dr. Brown, of St. Louis, read a most valuable paper on this subject.

He clamps the intestine above the obstruction and then puts in a Mixer tube or Paul tube (suggested about a year apart), which is practically the same thing as a glass tube, with a flange at the end. This is introduced through a slit into the bowel and a purse-string is tied about the tube. You need not bother with the collapsed intestine below. You allow the tube to remain and to go on draining into a tub on the floor. When you get through the operative work you can make the connection of the two segments of bowels, thus securing continuity of the intestine again, or you can drop an umbrella catheter through a small slit, and with two Lembert stitches on each side above the umbrella hold it within the bowel, or the Mixer tube may be left in, or, if you prefer, in some cases close without any enterostomy at all.

DRS. C. B. LAWRASON and T. P. LLOYD, Shreveport, read a paper entitled

Report of a Case of Successful Ligation of the third portion of the right Subclavian Artery.

It is not our purpose or desire to discuss the treatment of aneurism, nor have we anything new to offer in technic.

The object of this short paper is to report the successful ligation of the right subclavian artery for aneurism of the axillary.

The mortality of this operation is about 50 per cent—164 operations with 83 recoveries, which is yet too high, due partly to the operation, per se, and partly to too extensive surgical procedure at one sitting.

In this case we carefully weighed all conditions present and determined to proceed as rapidly as possible, with minimum shock and traumatism, with the idea in view of subsequently obliterating the sac if result was not satisfactory; as yet we have had no cause to regret this step, as eight months have elapsed and recovery seems to be complete.

Patient presented the following symptoms:

Family history unimportant, no specific history; age, 45; occupation, real estate dealer; for past two months has been suffering with pain in right arm, extending to finger tips; has been treated for neuritis; made a journey to Hot Springs, hoping the famous waters would prove beneficial.

When examined by us a few days previous to the operation,

diagnosis was easy. He presented a large pulsating mass just under the clavicle and filling the supra-clavicular space. Incision was made along lower border of clavicle from one-half inch of sterno-clavicular articulation with convexity downward to coracoid process, the fascia and attachment of pectoralis major to clavicle were divided, the cephalic vein was tied and the costo-coracoid membrane split and pushed aside, thus exposing the vessels.

The clavicle was divided and both ends pushed upward.

The acromio-thoracic artery and all vessels connected with aneurism were ligated, a heavy double cat-gut ligature by means of an aneurism needle was carried around the subclavian artery above aneurism, which was followed by another ligature of like nature below aneurism; the first ligature was then tied, after which ligature No. 2 was tied, muscles, fascia, etc., were reunited with cat-gut sutures, clavicle wired, drainage placed, wound closed with interrupted silk worm gut sutures.

The arm was kept warm with cotton wrapping, augmented with electric pad. On the eighth day following operation faint radial pulsation was noted. Recovery was slow but uneventful. He was about two months regaining full use of his arm. The operation was performed on October 12, 1910.

DISCUSSION OF THE CASE BY DR. LAWRASON AND DR. LLOYD.

DR. WILLIAM M. PERKINS, New Orleans: Dr. Lloyd suggests that some of the other surgeons here might say that something else ought to have been done in this case. The first thing to do is to get the patient well. This seems to have been done; hence, there is no criticism to offer.

DR. E. DENEGRÉ MARTIN, New Orleans: I want to congratulate these gentlemen on this excellent result. Those of us who have been up against such cases fully appreciate the difficulties. Dr. Parham and I had a similar case, and I am proud to say that the man is still alive, so far as we know.

DR. J. L. WILSON, Alexandria, read a paper entitled

When shall we Operate in Crushing Injuries?

I offer no apology for bringing before the Society so practical a subject as when to resort to operative procedure in crushing injuries. The already large and rapidly increasing number and

variety of industries throughout the State—factories, sawmills and railroads—suggest that we should have matured views on this vitally important subject.

Our knowledge of the nature and peculiar risks attending these grave injuries, together with the experience and observation we may have had in handling such cases will surely decide us as to when, if at all, to resort to the knife. Just here I would say that we should not let relatives and friends of a patient have any voice in suggesting when we should operate. Any insistence on the part of relatives and friends that operation should be done at once, should be treated with courteous indifference. The surgeon should be firm, relying exclusively on his own judgment in the case before him. The question as to when we should operate in severe injuries, accompanied with shock or hemorrhage, has been a mooted one among surgeons for years. Surgeons equally eminent as teachers and authors have entertained opposite views in this matter. Notwithstanding the difference of opinion which has existed throughout the past, I believe the opinion to-day among surgeons is that we should wait until the patient has reacted from shock and hemorrhage before any operative procedure is attempted. The length of time that operation should be delayed with safety in these cases will depend on the location of the injury, the probability of early infection and the condition of the patient with reference to shock.

The best advice which we can give in such cases is that we should wait until reaction from shock has at least partially taken place, even if we should have to wait twenty-four or forty-eight hours, or even longer. I am sure that I have seen a number of patients recover after severe multiple injuries of the extremities, simply for the reason that sufficient time was allowed for shock to pass, before any attempt was made to operate.

On the other hand, I have witnessed deaths in such cases in which the added shock of the operation hastened the end.

Now, believing as I do that we should always consider, first, the patient's interests in these cases, giving them the greater chance for recovery, by waiting until their condition will admit of operative intervention, the question arises: What shall we do with such patients. In the treatment of such cases as we have under discussion, in which it is plain that surgery is indicated to assist in

the repair of the damaged tissue, we must not lose sight of the fact that it is very necessary that we do only that which is indicated, and that we do it at the proper time.

Our text-books of surgery serve us as a guide in operations, but in the class of injuries under discussion our personal experience must serve us largely as a guide.

The special condition found in crushing injuries requiring immediate treatment, are hemorrhage and shock. No patient suffering from profound shock should be subjected to operation except that which is necessary for the control of hemorrhage, and no procedure for this purpose should be more extensive than is absolutely necessary.

If compression or constriction will not control the hemorrhage, then we should immediately do only that which is absolutely necessary in order to close the blood vessels by ligature. Having controlled hemorrhage, we should give the patient an anodyne for the relief of pain. If the condition of the patient will admit, we should give the anodyne even before we control hemorrhage. Just here I would sound a word of warning against the too frequent or indiscriminate use of morphia or other opiates in such cases, for, in my judgment, I have seen patients to whom too much morphia had been given.

We should remove any mutilated, hanging pieces of tissue or foreign bodies from the wound when the removal of such will not add to the shock of our patient to any extent. The wounds should be as thoroughly cleansed as surroundings, time and the condition of the patient will admit of, and a sterile dressing applied. In some cases we may deem it necessary to apply a moist antiseptic dressing or perhaps use a bichloride of mercury drip. The foot of the patient's bed should be raised in order to favor the return of blood to the brain, heart and other internal organs. Last, but not least in point of importance, is the treatment of the patient for the relief of shock.

Physiologic rest being most important in the treatment of shock, the patient should be kept mentally and physically at rest. The physicians and attendants should bring assurance and confidence to the patient.

All relatives or friends whose presence in the room is detrimental to the patient should be required to retire until the patient's condition is improved.

Perhaps the best method of treating a case of shock is by introducing normal saline solution by one of the methods commonly used. The method which we could use quickest under many circumstances under those conditions which we find in private homes, railroad yards and sawmills, will be the hot saline enema.

The most rapid method of filling the blood vessels and no doubt the best, is by direct infusion of normal saline solution into a vein. The sub-cutaneous method may be used also, and by many is considered the best way in which to give saline solution.

It is said for the saline solution that it is capable of absorbing oxygen in the lungs and carrying it to and giving it up to the tissues. In addition to the above treatment, the patient should be surrounded by heat, care being taken not to burn the patient. The patient should also have a moderate amount of stimulation with strychnia or digitalis, or both, given sub-cutaneously. Adrenalin solution may be given with good results in raising blood pressure. It may be combined with normal saline solution (15 minims to 500 C.C.).

In extreme cases we should surround the extremities with cotton and place over this an elastic bandage, so as to assist in retaining the blood of the patient in the trunk.

The following cases fully illustrate the wisdom of delay in crushing injuries accompanied with shock:

Case No. 1: S. G., negro; age 21. On December 29, 1910, while sitting under a box car on a railroad siding, was run over by the car; as a result he sustained a crushing injury of all tissues of the right leg from the knee down, a compound comminuted fracture of the left thigh, a compound fracture of both bones of the left arm at upper third.

He was brought to the sanitarium in almost a dying condition; shock being most profound. I ligated the blood vessels in the crushed leg, cleaned the wounds as best I could, placed the patient in the emergency ward, believing that he would die soon.

After the hemorrhage was arrested I began to administer normal saline solution sub-cutaneously and by rectum. I also gave him strychnia and other stimulants, surrounding him with bags of hot water. He lingered between life and death for twenty-four hours, at the end of which time his condition showed some improvement. He continued from that time on to show improvement, and at the

expiration of forty-eight hours his condition was such that I was enabled to amputate the right leg and give the other injuries the proper treatment.

The patient recovered after a long time, of course, as you may judge from the injuries and conditions mentioned.

Case No. 2: C. T., white; age 30. A railway brakeman; was run over by a box car, sustaining a crushing injury of the right leg, extending from the knee to the foot. He lost a considerable amount of blood and had to be transported a distance of about fifty miles in a caboose before arriving at Alexandria. When he reached the sanitarium he was suffering from extreme shock, with practically no pulse at the wrist. The vessels of the leg were ligated; the mangled tissues removed; the parts cleansed and a sterile dressing applied and he was put to bed. I immediately gave him normal saline solution by enema, also by subcutaneous method; strychnia and digitalis were given and he was kept warm by hot water in bags.

For a number of hours thereafter it looked as though he would die, but after about sixteen hours he began to show improvement, and at the expiration of twenty-four hours his condition was such that I was able to amputate the leg and he made an uneventful recovery.

There can be no question that, in both cases cited, if operation had been done at once, the patient in each instance would have died. In conclusion, I make a plea to the general practitioner who does surgery for sawmills, factories and railroad companies in the smaller towns and in the country, whose experience in the handling of these grave cases has been limited, that every effort be made to assist the patient in recovery from shock before any attempt at operation is made.

It would be far better in the long run to know that every effort had been made to save the patient without result, than to feel that we had superimposed the additional shock of operation and perhaps hastened the patient to the end of his journey.

DISCUSSION OF PAPER BY DR. WILSON.

DR. THOMAS RAGAN, Shreveport: I desire to call attention to a case in which the patient died from shock with a most insignificant injury. The patient sustained a slight injury below the knee on the outside of the leg, and did not lose more than a tablespoonful

of blood, walked a short distance, was very pale, sat down, had doctors look after him, worked on him for eight or ten hours, giving strychnia, morphin, hypodermically, and normal salt solution intravenously. I saw him some time later and gave him more normal salt solution, together with adrenalin chlorid, and without any other sign of injury he died from shock. Nothing we did had any effect. I could never understand why this man should have died. It seemed psychic altogether.

DR. F. W. PARHAM, New Orleans: Perhaps if you had given that man morphin and omitted stimulants, he might have lived. That suggests to my mind one thought in the treatment of such cases as this reported by Dr. Wilson. I do not think that the last word has been said, by any means, on the subject of the proper treatment of shock. Personally, I have been so much impressed with the experimental work of Crile that I have almost discarded the use of digitalis, strychnia and nitroglycerin in my practice. I am sure my cases in the last two or three years have been fully as grave as the others I used to treat, as I thought, with such satisfaction by means of digitalis, strychnia and nitroglycerin. I have come to believe in some of these cases, instead of benefiting them by stimulants, we actually do harm. Crile has stated that one of the most convenient ways to produce shock in his experimental work was by giving large doses of strychnia. That impressed me very much. It seems to indicate you may do harm with the stimulants, and not good. I have relied largely on the judicious administration hypodermically of morphia associated with atropin, combined with the rectal administration of normal salt solution with coffee. I have found that to be practically all I could do in the way of medication.

So far as delay in the treatment of these cases is concerned, because that is the real point of Dr. Wilson's paper, or when shall we operate in these cases of crushing injuries, I should like to say this, that men who have had considerable experience with this class of cases, such as in the mines of Pennsylvania and other places where these injuries are often seen by surgeons, have gotten to believe in the beneficial effect of spinal injections of cocain. I believe that we may take a patient in a state of profound shock, due to peripheral impulses constantly passing up from the injured limb—I speak of injuries of the lower extremities—and, by the

administration of cocain into the spinal canal, remove the crushed limb at once and get rid of further source of shock, instead of delaying operation. I am inclined to believe that we may, in some cases, benefit the patient by operating earlier than we have been in the habit of doing. I mean to say this, that while I think, in a general way, I resort seldom to spinal injections of cocain for anesthesia, I still feel that this indication remains in the operative treatment of cases marked by shock.

DR. E. DENEGRÉ MARTIN, New Orleans: This is one of the most interesting subjects that could be brought before the Association, especially for those who are doing railroad surgery, and in that particular field I have had some experience. I think we should divide shock into three stages—namely, shock from hemorrhage, shock from pain, and psychic shock. Each has to be met in a different way. Whenever we have shock from hemorrhage, in these cases we should at once check the hemorrhage and infuse, and in that way get the patient in a fairly good condition. If we have shock from pain, we must overcome that pain; if that pain is produced by constriction, a band that is put on to check hemorrhage, it is better to relieve the pain with morphia and amputate at once, because as soon as the morphia wears off the pain will continue. That is an important point. Then we have shock from fear, which is common enough, and which can be overcome by rest and assurance that the patient is all right. Let me illustrate by mentioning one case of that kind. I remember a negro patient who was brought into the hospital after having been shot in the foot, as he thought; he was covered with profuse perspiration and suffered from intense pain. When taken to the amphitheater and examined it was found that a spent bullet had struck him on the ankle, which showed a blue mark. When he was told that he was not shot through the foot he said, "Thank God," and walked out. (Laughter.)

DR. WILSON (closing): This question resolves itself into one of the *condition* of the patient. Those who have done railroad surgery not infrequently get cases with crushed feet, in which, apparently, there is no shock. Of course, in such cases, we would operate at once, but when we get a case of severe crushing injury, and the patient is pulseless at the wrist, practically, with the other symptoms of shock, we had better wait, and observing surgeons

know that. The paper was written with the idea of cautioning those of limited experience, those who only occasionally see these cases, against hasty operation.

With reference to Dr. Parham's suggestion as to the injection of cocain solution into the spinal canal, that is all very nice and good, but there are very few country doctors who know how to do so, or who are prepared to do it. Therefore, it is not a method that will become of general use by the country practitioner. Of course, we are taught that the injection of cocain into the large nerves, when exposed, by using a certain number of minims of a two per cent solution, will prevent further shock. We must use other methods that are known to prevent further shock. A good deal depends upon the condition of the patient, and, when a patient is in the condition I have described, I think unquestionably the thing to do is to wait. If the patient should die, we have done all we could to resuscitate him from the shock, and we have not added further shock to the condition.

DR. M. H. McGUIRE, New Orleans, read a paper entitled

Surgical Relief of a Case of Gastroptosis.

"Nothing can be more repugnant to the ordinary mind than the thorough sifting of deep-seated and long-familiarized notions."

Although ptoses of abdominal viscera were recognized by medical men prior to the work of Glenard, published in 1885, it is due to his investigations that special attention has been given to sufferers from these conditions, and that efforts, both of medical practitioners and surgeons, have been directed to their correction.

Of the several terms used to denote this state of prolapse of the abdominal viscera, enteroptosis, gastroptosis, nephroptosis, splanchnoptosis, the latter is the more appropriate from an anatomical standpoint, because the first three refer to the prolapse of a special organ, whereas the last may apply to the viscera in general. In the case I have to report, the stomach symptoms predominated, and, therefore, I have used the term gastroptosis. The term enteroptosis, used by Glenard, means falling of the intestine, and was based upon his belief that the condition was primarily due to the sagging of the ligamentary supports of the colon, beginning

at the hepatic flexure and following a more or less regular sequence, until all the abdominal contents become displaced forward and downward. Later investigations have proven Glenard's theory erroneous, and while it is rare to find uncomplicated ptosis of any one organ, the general picture described by him is not always found.

Authorities differ as to the organs most frequently associated in ptosis, but the consensus of opinion is perhaps that it is the stomach and kidney (usually the right). Certain it is that displacement of either or both of these viscera is the cause of most of the discomfort which brings this class of patients to the doctor for relief. This association is sometimes emphasized by the failure to relieve by nephropexy a patient suffering with the manifestations of nephroptosis, when a closer examination reveals an associated gastroptosis, the correction of which relieves the condition.

The causes of ptosis are attributed to relaxation of abdominal parietes and ligaments from rapid emaciation due from any cause, but mainly to constriction of the waist by corsets and to the relaxation of the parts following pregnancy. From this etiology it follows that there are two classes of cases—the "virgin" cases of Rovsing, found in both men and women, and those in the nervous, multiparous women with relaxation of pelvic floor and abdominal supports, including diastasis of the recti muscles.

Keeping in mind the quotation above, I shall not tire you with symptomology nor treatment. However, I want to call especial attention to the dragging-back pains for which so frequently no satisfactory cause can be found, and to the early morning nausea and vomiting (2 to 4 A. M.), accompanied frequently with diarrhea.

Up to 1894, and for the most part up to the present, treatment of these cases was, and still is, medical, aided by various forms of bandages, made with the main idea of support from below. In 1894 Duret, of Lille, operated on a case of enteroptosis and reported satisfactory results; and since then Treves, Beyea, Rovsing and Coffey have all operated, with cures in the great majority of their cases. A description of their various methods may be found in any text-book of surgery of recent date.

The purpose of all is to fix the stomach in its normal position, either by suturing to the abdominal wall or by shortening the ligaments. The latter method (the one of Beyea) is the one recommended as the best adapted to the majority of cases, but was

not deemed expedient in the case which is the subject of this report.

Mrs. B. M., aged 34, stenographer. Father died of acute dysentery; mother from sup. cervical glands (tuberculosis). She had pleuro-pneumonia in 1897, neuritis in 1897, five months' duration; typhoid fever in 1901; no disorders of menstruation, which was established at age of 14. In 1904, exertion from moving heavy furniture caused pain and swelling in groin, which disappeared, but not until the spring of 1910 did patient begin to suffer with severe pain in left iliac region, with nausea and diarrhea at irregular intervals, the nausea and diarrhea coming on in early morning, between 3 and 5 o'clock. By the fall of 1910 recurrences became more frequent, dragging pain in the back increased, and in December, 1910, patient became incapacitated for work. Examination revealed a painful swelling just below and to the left of the umbilicus; fusiform in shape, and movable. Heart, lungs and kidneys normal. Examination of stomach contents as follows:

No free H Cl; no combined H Cl demonstrable; total acidity 32, due chiefly to lactic acid; occult blood test negative; microscopic examination, bread undigested; many bacteria and yeast cells. There are also present large, coarse bacilli that stain and look like Boas-Oppler bacilli.

Rest in bed, with dietetic treatment for two weeks, failed to benefit the patient, and being unable, even with the aid of a competent internist, to make a positive diagnosis and exploratory laparotomy was performed on January 16, 1911. Being suspicious of carcinoma, an incision was made below the umbilicus, and on opening the abdomen it was discovered that the swelling was the pyloric end of stomach, with somewhat thickened walls, but with no evidence with any diseased condition. Kidneys were found in normal position, and, except for a downward displacement of the transverse colon, all other viscera were normal. Realizing that the condition was one of gastroptosis, the abdominal wound was closed and another incision was made below the ensiform cartilage. The stomach was raised a little above its normal position, which tached to the anterior abdominal wall by four catgut sutures, which included the serous and muscular coats of the stomach and the parietal peritoneum. The abdominal wound was closed in the usual manner. Patient made an uneventful recovery and has had no recurrence of the trouble. She has resumed her work, and

reports herself, on May 26, over four months since the operation, as perfectly well, having gained five pounds.

This patient never vomited food, but three or four mornings of each week she vomited a disagreeable-smelling, thick, brownish fluid. After she recovered from the ether nausea she has not had a recurrence of this disagreeable feature. Notwithstanding the few cases of gastropstosis reported in the literature, upon whom operations have been performed, I believe the good results obtained in the majority of those reported justify the procedure, and I would urge our internal medicine friends to give the surgeons an opportunity to attempt to relieve permanently a class of cases which, under their plan of treatment, are under the physician's care more or less all the time.

I am indebted to Drs. J. B. Elliott, Jr., and E. D. Martin for valuable aid and suggestions in the management of this case.

DISCUSSION ON PAPER BY DR. MCGUIRE.

DR. MARION SOUCHON, New Orleans: Notwithstanding the perfect results Dr. McGuire obtained in the case he has reported, I wish to bring out the fact that the method described has been condemned, because the stomach is a movable organ, and it is a bad surgical principle to fix a movable organ to the abdominal wall by the method which I understood the doctor employed.

I had a case about a year ago, the patient presenting symptoms similar to those mentioned by Dr. McGuire in reporting his case of gastropstosis. We knew there was pyloric obstruction of some kind, due to a tumor, to an inflammatory condition, or probably to gallstones. The stomach was examined and outlined, and by the X-ray by Dr. Granger, who outlined an enormously dilated stomach, the lesser curvature being away below the umbilicus. The operation I did was Beyer's operation, or shortening of the gastro-hepatic and gastrophrenic omentum. When I got through with that I had to revert to the suturing of the greater omentum—that is, the stomach at the greater curvature, to the abdominal wall. The proof of the pudding is in the eating. Subsequent examination with X-ray showed the stomach in a good position, and the man has been comfortable ever since.

DR. E. S. HATCH, New Orleans: I would like to say a word or

two on this subject from an orthopedic standpoint. In a great many of these cases it is not only the stomach, but the transverse colon or kidney, or both, that are down, and many of these cases can be taken care of by suitable apparatus, and may not require an operation.

This subject was discussed before the American Orthopedic Association at its meeting held in Cincinnati recently, at which time Dr. Ransohoff discussed the surgical aspect, and Dr. Goldthwaite the orthopedic side, and the conclusion was reached that there are cases for both methods—that is, in some cases you can get relief without operation by the use of a suitable orthopedic apparatus and exercises, whereas in other cases you can get marked relief from operative procedures, such as that described by Dr. Souchon.

DR. G. H. CASSITY, Shreveport: I would like to ask Dr. McGuire how he accounts for the condition causing total absence of hydrochloric acid in the stomach, and whether the operation has restored the hydrochloric acid again?

DR. E. DENEGRÉ MARTIN, New Orleans: The points brought out by Drs. Souchon and McGuire are well taken, and it is only possible to do a certain operation in these cases, and, under the circumstances, one should do the best he can. In this case we did not suture the ligament. The next thing we did was to put in four sutures near the pylorus, not too far apart to interfere with rigidity of the organ. The result speaks for itself.

DR. J. C. WILLIS, Shreveport, read a paper entitled

Epithelioma of the Lip.

The habitat of the deep, infiltrating form of carcinoma of the face is the lower lip, and as the lymphatics of the lip drain directly into the submental glands, which lie just beneath the center of the lower jaw between the anterior bellies of the digastric muscle, also into the submaxillary glands, which lie along the under portion of the lower jaw, we see at once the important relationship which does exist between a malignant disease of the lip and the glands of the neck, and this is further emphasized when we remember that carcinomatous infections are disseminated by means

of infected lymph nodes, but, strange to say, that, in spite of this relationship, with its facilities for infection and dissemination, and while it is considered an act of mal-practice to treat cancer of other parts of the body by means of local application, such as caustics, pastes, etc., it is still practiced by some of the profession and tolerated by practically all in cancer of the lip, and I must admit that this form of treatment is just as sane and just as efficient as is that of the surgeon who contents himself and lulls his patient into fancied security by removing the classical, time-honored wedge-shaped snip only, as taught in our surgical textbooks not so very long ago. Who of us would dare to advocate simply the removal of the ulcerated parts of a carcinomatous gland, or would advocate the non-removal of the adjacent axillary glands under like conditions, until they showed evidences of infection?

The cardinal principle for the cure of all malignant growths, not some of them, is thorough and complete removal by means of the surgeon's knife—not only the diseased part itself, but all of the adjacent glands into which their lymphatics drain—and any operation done, in short, of this, is not only inefficient, but harmful, and under scarcely any circumstances should it ever be done; hence the extreme importance of these operations being done at the very earliest possible moment, before dissemination through the lymph channels has taken place in the more remote or vital organs, and which it would be impossible to reach.

I have under my treatment at this time a white man, aged about forty years, who is an unfortunate victim of a wrong diagnosis and improper treatment. Twelve months ago a diagnosis of the simple, or, at worst, a rodent ulcer, was made, and was removed either by pastes or by X-raying, and the incident closed. Why not? The object of the treatment, as the physician saw it, had been accomplished. The ulcer had healed, but, unfortunately, this was not the end of it with his patient, for, twelve months later, he came to me with a chain of enlarged submental and submaxillary glands for removal. He had almost, if not entirely, forgotten the history of the ulcer of the lip, that had been removed nearly twelve months before, until I reminded him of the little scar that the treatment had left behind. He had no conception, of course, of the relationship that existed between that scar on his lip and

the present trouble in his glands, but the seeds of malignancy had been sown, and he is now beyond surgical aid.

DIAGNOSIS.—All ulcers of the face which do not yield readily to treatment should be regarded with suspicion. Especially does this apply to those of the lower lip in persons in or beyond middle life, as this organ seems to be peculiarly the home of this type of cancer. Clinically you may not be able to distinguish the difference between the specific ulcer of the lip and a malignant one for the first few weeks, but, if specific, the glands will soon take on an inflammatory enlargement. Besides, you will most often find them in young persons, while the reverse is the rule in malignancy. However, should there be any doubt in our mind, the ulcer should be excised and examined microscopically, and if found to be malignant the glands should be removed at once; otherwise, of course, this will not be necessary, but we should bear in mind that many apparently harmless ulcers of the lower lip, which often respond readily to ordinary treatment, prove to be malignant, shown by the subsequent infection of the glands, which we are called upon to remove after evidences of infection by their enlargement has taken place—frequently a year or more after the disappearance of the apparently insignificant ulcer of the lip. In fact, very frequently the mere incident of an ulceration of the lip had been entirely forgotten, and the patient in no way connected in his own mind one with the other; hence we should be extremely careful in making a diagnosis of these cases.

METHOD OF DISSEMINATION.—The lymphatics of the lip are divided into two sections—submucous and subcutaneous. The submucous vessels pass directly into the submental and submaxillary glands on their respective sides, but the subcutaneous, two to four in number, pass over to the opposite side and intercommunicate with each other. Hence the necessity of removing the chain of glands on both sides, if we eliminate all possible danger of the return of the trouble, even though the lesion may have been confined exclusively to one side only of the lip.

PROGNOSIS.—There are no more satisfactory surgical operations in the whole domain of surgery—and I say this advisedly—than that of carcinomas of all kinds, if they are so located that they can be and are properly operated on at the proper time. There is a common belief by the public—and, I must say, among some of

the profession—that to operate upon cancerous growths of any kind will not only be of no benefit, but really detrimental, and it is with great reluctance, if at all, that many patients will submit to an operation of any kind if told that its object is to remove a cancerous growth, for they consider the condition hopeless and the battle already lost, and it behooves us to demonstrate the fallacy of such belief by making as early a diagnosis as possible in these conditions and insisting upon an early and thorough extirpation before its deadly dissemination has taken place. Hence the prognosis of cancer of the lip is either extremely good or extremely bad, for success or failure depends almost entirely upon when, where and the method of treatment, for, if the diagnosis is made before the glands become infected, which, fortunately, is usually slow in its progress of distribution, and thorough operative measures taken, the results are almost universally good. On the other hand, should proper operative treatment be delayed until the glands become involved, there is no treatment, operative or otherwise, that will be of the least permanent benefit.

TECHNIC.—As pointed out above, the operation should be thorough. Nothing short of the removal of a greater portion of the apparently uninvolved segment of the lower lip, including, of course, the ulcerated process, preferably *en bloc*, slightly V-shaped, to assist in approximation of the lower segments. This should extend to the lower portion of the chin, and from this point make two incisions one finger's length breadth below and parallel with the lower jaw, outward to the line of carotid artery. This incision should include the skin and platysma, which are dissected upward and backward to the level of the lower jaw, thus exposing the submental and submaxillary gland area on both sides. I usually start my incision in the middle line, commencing with the submental, dissecting backward the gland-bearing fascia, continuing across the anterior belly of the digastric, taking all of the submaxillary lymphatics and glands *en bloc*, for Crile, Mayo and others have demonstrated very clearly that the ultimate results are very much better by the removal *en bloc* rather than the old way of trying to deal with each individual gland. The only structures to be especially avoided are the facial and hypoglossal nerves, and, should the involvement be so great as to necessitate the removal of the greater part or all of the lower lip, it will be necessary to

make a new prolabium by incising the corners of the mouth by means of an incision at this angle backward and upward for about one inch, cutting through both skin and mucous membrane, the lower flaps being brought forward in the middle line, and the mucous membrane is then stitched to the skin, preferably with either horsehair or fine linen sutures. This makes an admirable lower lip. A small rubber drain should be placed, each in the right and left angle of the wound in the neck, which should be allowed to remain for three or four days, or until the accumulated serum ceases to be discharged, and the skin wound closed. These patients usually make a good and rapid recovery, being out of bed at the end of four or five days, and suffering little or no inconvenience from the wound after the first twenty-four or thirty-six hours.

DISCUSSION ON THE PAPER OF DR. WILLIS.

DR. H. B. GESSNER, New Orleans: I think it is important to have the co-operation of the pathologist in the handling of a case of this sort, and to have the specimen examined so as to make sure that the incision for the removal of the epithelioma is carried beyond the area of invasion. I had a case last winter which impressed that point on me very forcibly. This patient had had an epithelioma of the lower lip for about six months, and had been under the care of a quack, who used paste. When I got through with him I thought I had been very liberal indeed in my removal. The specimen was submitted to the pathologist, and, notwithstanding I made a liberal excision, I did not get completely beyond the epitheliomatous invasion. The first operation was done under a general anesthetic. Under cocain I went back and removed half an inch square of skin on either side, and resubmitted this tissue to the pathologist, and the report I received was that I had gotten beyond the invaded area. The important thing is that you cannot tell with the naked eye, nor can you tell by the touch, just how far the cancerous cells have invaded the surrounding tissues, and in order to be certain not to have a recurrence *in situ* it is well to have the edges of the removed tissues carefully examined by the pathologist, and in that way alone can you tell whether you have gone beyond the cancerous tissues.

DR. H. B. GESSNER, New Orleans, read a paper entitled

Two Cases of Cryptorchidism Operated On by the Bevan Method.

CASE I. David L., white male, aged 20 years, laborer by occupation, was admitted to Dr. R. Matas' service in the Touro Infirmary in June, 1910. He gave a history of having been operated on ten years before for hernia; in the course of this operation the corresponding testicle (right) was removed. The object of his coming into the Infirmary was an operation for undescended testis on the left side. The patient did not complain of any pain, but said he felt an unpleasant sensation in the left lower abdomen, quite far down—a feeling of weight, or a dragging sensation. Examination showed a short scrotum, without contents, while the testis could be felt above in the inguinal canal; it could be made to come barely through the external abdominal ring, but no further.

He was operated on by me under ether anesthesia. The external ring was enlarged; the testis was drawn out so as to make tense the obliterated vaginal process, which was divided. This division made possible the easy drawing down of the testis (subnormal in size) to the bottom of the scrotal pouch. A suture of catgut was introduced through the bottom of the scrotum, its loop traversing the lower end of the tunica vaginalis testis and drawing the organ down to the bottom of the pouch. A slender hernial protrusion was cleared to the internal ring, ligated and cut off. The muscles were then brought together as follows: Conjoined tendon to Poupart's ligament, over the dropped cord, by means of U sutures, the strands of which pierced the ligament; external oblique imbricated.

Primary union resulted. The final result was satisfactory, the testis remaining comfortably in the scrotum. Patient was discharged two weeks later. In March, 1911, the condition was still satisfactory. The patient is masculine-looking, and his one organ is probably sufficient for all purposes.

CASE II. Adam H., colored male, 18 years old, field hand by occupation, was admitted to my service in the Charity Hospital on November 18, 1910. He said that when a little fellow he had noticed a lump in his left side. This increased in size when he worked hard, and hurt so much that his work was interfered with.

Examination showed the left half of his scrotum empty; above Poupart's ligament a tender mass, about the size of a rather small testis, could be felt, movable from side to side, but not deliverable through the external ring.

November 22 I operated under ether anesthesia. There was no external abdominal ring. The aponeurosis was incised; the incision was carried down to the peritoneal sac surrounding the testis, from which free serous fluid escaped. The peritoneal sac was divided transversely; the distal pouch was sutured with a purse-string above the testis to form a tunica vaginalis; the upper portion, a potential hernial sac, was freed to the internal ring, ligated and cut off. The testis could not at that time be drawn down into the scrotal pouch. The vas was, therefore, isolated with its vessels, and the remaining vascular structures of the cord double ligated and cut. The organ was then readily drawn to the bottom of the scrotum, where it was held by means of a U-sture through tunica and skin, as well as by a purse-string suture through the fascide just above the testis. The muscles were brought together as described above, following the usual technics of Dr. Rudolph Matas' clinic.

A moderate degree of swelling of the testis followed. Primary healing occurred, and the patient went home a fortnight later.

These cases are reported in order to encourage general practitioners to bring similar cases to operation. Bevan says that one out of 500 males has a misplaced testis. Nevertheless, operations for this condition are comparatively infrequent, probably because practitioners are not aware of the good results obtainable. It is our duty to inform them of the excellent results easily procured, and to call their attention to the good reasons for not neglecting this abnormal situation of the testis: pain, exposure to injury, non-development of important organs, danger of malignancy and psychic influences.

So far as the technic is concerned, I wish principally to comment on the clear description given by Bevan in his article in Keene's System of Surgery (Vol. IV, page 594). It is faithful to the smallest detail. The U-suture fixing the tunica vaginalis testis to the scrotum is an addition to this technic, serving to eliminate any possible dead space in this region.

One little point should receive special attention: when the

testis is drawn down into the scrotum, after division of the vessels, care should be taken to avoid torsion of the slender remnant of cord from which the organ hangs. The vascular supply for the in- and out-go of blood is scant enough; a moderate degree of twisting might easily be followed by necrosis.

Since operating on these cases I have learned of a new method for the relief of cryptorchidism, that of Dr. Charles Davison, of Chicago (See "The Surgical Treatment of Undescended Testicle," *Surgery, Gynecology and Obstetrics*, March, 1911, page 283). According to this technic, the spermatic vessels as well as the nerves and lymphatics which accompany them are conserved, the special feature being the transplantation of the spermatic vessels so as to lengthen the cord and permit the scrotal orchidopexy to be performed. The successful carrying out of this plan insures a functioning organ—a result not so likely after the somewhat mutilating Bevan technic.

Orleans Parish Medical Society Proceedings.

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DR. HOMER DUPUY and DR. W. H. BLOCK.

MEETING OF JANUARY 22, 1912.

DISCUSSION OF DR. ALLEN'S PAPER.

DR. DUPAQUIER: I wish to say a few words in regard to the "vascular spasm theory of Pal," to explain pain.

Judging from the results obtained in the management of patients complaining of perverted sensation, and especially of sensation of suffering, with all the measures at our command, hygienic, dietetic, mechanical, medicinal and psychic measures, I think the vascular spasm hypothesis regarding the production of pain is a good, work-

ing one. Of current observations I submit to you the following, briefly:

First. Effects of "Hygienic and Dietetic" Measures in Cases of Vascular Spasms.—Take, for instance, patients in the first and second clinical stages or phases of the evolution of arteriosclerosis as Huchard presents it clinically. In the first, blood pressure is raised, only transiently at times; in the second, B. P. is raised permanently.

Before attempting to reduce this above-normal B. P. with *apressors* (vasodilators), namely, the nitrite group, first, etc.... (a procedure, by the way, demanding precautions), we warn these patients against the immediate danger of emotions, worry, over-work, mental and physical excesses of all kinds, all producing sudden vascular spasm, which causes perverted sensations, painful sensations in the head, heart, abdomen, extremities, and causing at times such a resistance that the heart fails in endeavoring to meet it.

The proper mode of living, which means strictly hygienic and dietetic measures, in preventing "vascular spasm," prevents also perverted sensation, painful sensation. Hence, the relation of cause and effect between vascular spasm and perverted or painful sensations.

Second. Effects of "Mechanical" Measures in Cases of Vascular Spasm.—The substitution of a sensation for another will relieve pain. For example, the sensation of heat, pressure, suction, massage, relieves painful sensations by converting active spasmodic congestion into passive, relaxing congestion. Here again the vascular pain-producing spasm is checked.

Third. Effects of "Medicinal" Measures.—Potassium iodide is so useful in arteriosclerosis, not because it cures the arterial changes, which are incurable, but because it prevents spasmodic contraction of blood vessels, or vascular spasm, which is the constant, imminent peril. Caffein, in painful sensations, relieves, because, while at first it has a central vaso-constricting effect, it quickly becomes, to remain, a vaso-dilator. Indeed, it heads the list of the three most dependable vaso-dilators we have, namely, caffein, theobromin and theocin.

Like antipyrin, and, for that matter, like all analgesics which may cause collapse, pyramidon relieves in tabetic crises because it checks the vascular spasm which causes the crises.

Fourth. Effects of "Psychic" Measures.—Re-education in psycho-therapy is nothing else but the substitution of a normal idea of a sensation becoming actually a fact, the normal sensation itself for a morbid idea of a sensation, which had become actually a fact the morbid sensation itself. I will make this clearer. Here is a pure neurasthenic, meaning a fellow who has lost his will-power, for that is what neurasthenia is; in fine, loss of will-power. This neurasthenic has entertained so much the morbid idea of pain, insomnia, paresis, for examples, that the idea has become an actual fact of pain, an insomnia, a paresis, etc.

Now, take the B. P. of this fellow, not once, but repeatedly, and you shall find it above normal, in spite of the general appearance of inactivity, depression.

Now, go through the process of re-education according to Bernheim's method, which is "suggestion" in a degree of hypnosis, but during the state of wakefulness (*Suggestion à l'état de veille*), the details of which are too long to enumerate here, and proceed to substitute, by gentle persuasion, a normal idea of sensation for the morbid idea of sensation, converting the ideas into actual facts, which is the basic principle of brain-work, and the B. P. shall become normal again.

In other words, we might put it in this way: Through the process of re-education a sensation of ease, comfort and health has supplanted that of perversion, torment, pain, and the normal tension now existing indicates the relation between the proceeding morbid state and the raised B. P. existing then.

Of course, underlying causes of vascular infections, intoxications, retentions, are the primary cause, but the fact remains that the vascular spasm caused the perverted sensations, pain and torment, and that all measures which aim at checking this vascular spasm will bring immediate relief in many cases of pain, if not in all pains.

DISCUSSION ON DR. KING'S PAPER.

DR. C. C. BASS: During the past three or four years sporadic cases of cerebro-spinal meningitis have occurred in nearly every State in the Union. Within the past twelve months there have been cases of specific meningococcus meningitis in at least two widely separated localities—both Louisiana and Mississippi. These

widely separated sporadic cases point to the fact that the meningococcus is disseminated over a great section of country, and to the further fact that meningitis depends upon other factors in addition to the specific meningococcus. These, probably, are chiefly trauma and certain nasal infections with other bacteria—"bad colds."

The most probable source of meningococcus infection is, in my opinion, handshaking. If a meningococcus carrier happens to have a slight or severe "cold," and blows his nose on his handkerchief a few times, he soon surely infects his hands. Though the organism probably cannot live long on the hands, they may live long enough to be planted on the hands of another individual in handshaking. He, in turn, may promptly inoculate his nasal secretion, especially if he also has a "cold" and frequently wipes the nose with the handkerchief which he has infected.

DR. DUPAQUIER: Unexpectedly I found my name on the program to open this discussion. I am very thankful to my friend, Dr. King, however, for the opportunity of contributing my share to the consideration of the subject, a serious matter for us, right now.

It is hardly possible to discuss directly a paper like this without preparation, as most of us have had but a limited experience with the disease. The best procedure, under the circumstances, is to gather information from those who know, and present it as a collateral of the paper read. Among the reliable data on the subject within my reach I have read carefully a report of Major Rouget, a French Army Surgeon, on Epidemic Cerebro-Spinal Meningitis, read and discussed at the Twelfth Congress of Medicine at Lyons last October.

We are all on the lookout; but, as scouts, we must know a few things in order that no mistake in any way is made, and those of us who seek clinical material in tenements and human rookeries must be prepared to clear up some points before reporting suspicious cases to the Board of Health.

Under the present circumstances, all cases with the least cerebro-spinal symptoms may be looked upon as suspicious. It is well, then, to remember that other infectious diseases prevailing in winter—cold, damp winter—like epidemic cerebro spinal meningitis, namely, broncho-pneumonia, pneumonia, influenza, eruptive fevers, quite

often produce cerebro-spinal symptoms; and of my personal recollections from cases seen in Paris, scarlatina was among the most commonly misleading infection, the scarlatinal *coccus* (?) (meaning the suspicious streptococci in short chains or in diplococcus form found in the blood and in the faucial exudate—Class, Baginsky, Somnerfeld, Itektvero, Poynton), setting at once upon the meninges from the start, as it does on the pleura and joints. Descroizille and Laveran, at the time, insisted on the common occurrence of the mistake.

Netter reported many, many cases of cerebro-spinal meningitis where the pneumococcus simulated the meningococcus meningitis. Rhigi's case of a little boy, seven years old, down with cerebro-spinal meningitis cured by an injection of the serum from the blood of his sister who was convalescent from a similar attack, proved to be due to the pneumococcus, says Consby (*Maladies de l'enfance*).

Some will argue that the examination of the cerebro-spinal fluid would settle the matter. Now, this is another extremist's view. The meningococcus may be absent in the fluid. It is not *all* cases that can be certainly diagnosed, but many.

Job, in the discussion of Major Rouget's report, cites cases where the meningococcus could not be found in the fluid, and was present only in the nasal discharge. Others have found it in the conjunctival discharges, the sputum and the urine.

Some say epidemic cerebro-spinal meningitis is but a complication of a specific rhino-pharyngitis. This rhino-pharyngitis may be slight and hardly noticeable, and the brain and spinal cord may not become infected. Persons thus slightly affected are "carriers," and may spread the disease, causing severe forms.

The number of "carriers" is considerable; so are mild cases, walking cases, of spinal meningitis, with only a slight rigidity of the neck and back. Netter, however, objects to the view that the presence of the meningococcus in the naso-pharynx is all-sufficient to cause an attack. He insists on additional and concurrent factors, unsanitary and meteorological influences.

Koplik says that, in epidemics so far observed, it was not the rule that several members of the same family in the same household were attacked. In other words, epidemic cerebro-spinal meningitis has no marked tendency to spread.

The meningococcus, says Rouget, is fragile. It is as fragile as the gonococcus ; its apparent picture is resistant.

Army regulations, according to Rouget, in France, prophylactic measures in barracks, are said to be effective. The "carrier" is isolated. Inhalations with the following are made:

Iodin.....	12 gms.
Guaiacol.....	2 gms.
Thymol.....	0.50
Alcohol, 60°.....	200 c. c.

Then, swabbing the pharynx with a 1 to 30 of iodine in glycerin is made. Only after two successive reports, at several days' interval, when both reports negative, is the suspicious soldier set free. In private practice such disciplinary regulations are not practicable.

It is a pleasure to hear from experienced ones that the simple care and rinsing of the mouth and throat with a 10 per cent dilution of peroxid of hydrogen is amply sufficient as a prophylactic for those around cases.

Before closing these notes a few words regarding the anti-meningococcus serum. Flexner's serum in the United States has reduced the mortality down to 25 per cent. Dopter's serum in France, down to 16 per cent.

All those present at the discussion of Major Rouget's report warned against the danger of larger doses and repeated injections, 45 c. c. being called a large dose. Cases of death following a second injection were reported. It is necessary to always examine the fluid before injecting a new dose, each time injecting it only if examination is positive. Death in some cases was due partly to anaphylaxis and partly to the complication by the tubercle bacillus, tuberculous cases being markedly hypersensitive to horse serum.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

Graduate Interns for the New Orleans Charity Hospital.

The New Orleans newspapers of February 27 announced the important news that the Board of the Charity Hospital had decided on February 26 to admit only graduates to intern positions hereafter. If this newspaper announcement is confirmed by the promulgation and execution of such a decision by the Board, an important change has been brought about in the Hospital, and one for which a considerable contention has been made for a number of years. By this step the Charity Hospital may come into line with other similar institutions in this country.

It must now be only a question of time when a complete reorganization of the internal management of the hospital will take place. We adverted to this in our March number and we are minded to discuss the different phases of the subject until something material happens. It is, of course, not enough for the degree of the intern student to be changed, for it makes no difference whether the intern is undergraduate or graduate, if his status remains the same.

In other hospitals the intern staff is graded according to terms of service, and in most places the longer service entitles the physician intern to more dignity and more privileges. Such an arrangement can only arrive after a reorganization of the medical atmosphere of the hospital.

Right here the JOURNAL wishes to make a clear statement of its attitude to this whole question, and particularly so far as the house staff is concerned. No individuals are aimed at in any of the discussions. We are finding fault with a system which has outlived its times and its usefulness. We know that succeeding generations of house surgeons and their associates have rendered excellent service to the State and to the institution, and we made plain our position long before the induction of the present staff into office,

but the existing *system* of the Charity Hospital personnel, even if framed after its predecessors for many years, is not only not popular with the local medical profession and the visiting staff, but is actually obnoxious to most of the gentlemen of the medical profession falling in either class. With so strong an objection there should be such a change as will satisfy those most interested. We have already tried to show that the public as well as the profession are actually made subsidiary by the present medical organization of the Charity Hospital, but this must be necessarily argued over and over again before it can bring about results. The house officers of the Charity Hospital should be the first to see the delinquencies of the hospital, but the unfortunate traditions of office have made them blind to conditions so near to them.

The recent Conference of the Council on Medical Education of the American Medical Association, of the American Medical College Association, of State Examining Boards and of the Committee of the A. M. A. on Public Health agreed on the desirability of making a wholesale investigation and classification of hospitals in the United States, as it seemed to be the consensus of opinion that many hospitals of great reputation failed in their purposes. These purposes, as stated, were of public service, embraced in their function as eleemosynary institutions, for the sick and for the education of those who care for the sick.

Where would our Hospital fall if such classification was made now?

The Board of Administrators of the Charity Hospital has only begun to make changes, and that Board should see to it that the changes go on to complete revision of the medical side of the Hospital, until the true purposes of the hospital are fulfilled. Undoubtedly better service will be derived from graduates as interns, but that service could be much better still if it were properly directed by a visiting staff having control of the medical and surgical services and conducting them under modern methods, now lacking in the present system. Everywhere this plan is coming into practice, and even in New Orleans the Touro Infirmary has set a most excellent example. At this institution the medical affairs are directly in charge of a medical staff, who act advisory to the Board of Trustees and whose efforts in the interest of the medical side of the institution are furthered by a qualified superintendent. Why cannot the Charity Hospital do likewise?

The New Orleans Meeting of the State Society.

The local Committee of Arrangements has exercised unusual effort in providing for a record meeting of the State Society for April 23, 24 and 25. In addition to a promised program full of State talent, a number of distinguished guests are featured for the meeting. Among these we are pleased to note Drs. Adami, of McGill; Charles F. Craig, of the U. S. Army; Cullen, of Johns Hopkins; Edsall, of Washington University; Carl Beck, College of P. & S., Chicago, and Alexander R. Craig, Secretary of the A. M. A.

The members of the Society must show their appreciation of such a galaxy of medical luminaries by a large attendance and in coming feel assured of the welcome the New Orleans profession will give them.

The program, even in preliminary form, has not appeared, until this issue of the JOURNAL, and this is regrettable, for the majority of the members of the Society are interested. The former practice of printing the program, in part, at least, from month to month, should be resumed.

The JOURNAL, as usual, excuses itself in the matter, as its function is solely to print the matter furnished by the proper officials of the Society, and as this is always done as promptly as copy is received, we desire now to decline any responsibility for either policy or delay.

The Louisiana State Board of Medical Examiners Honored.

The present State Board of Medical Examiners deserves the encomiums of the medical profession of Louisiana. It has lifted the status of licensure from a political commodity to a privilege obtained by honest test. Not only has the system of examination been changed so as to make the test rigid and impartial, but, in addition, the standards have been improved so that only graduates from Class A colleges are received for reciprocity.

More than this, the question of preliminary education has been so established that hereafter only graduates from four-year high schools with fourteen units of education may apply for examination. Such units must be established by credits passed upon by

standard university admission committees or by the Superintendent of State Education of Louisiana or by the Superintendent of Education in New Orleans. Moreover, such credits must be set forth in detail, showing subjects, periods and text books followed.

The Board additionally announces that with October, 1912, practical examinations will supplement the written examinations. It is all the more deserving, then, that the Secretary of the Louisiana Board, Dr. A. B. Brown, should have been honored with the Presidency of the National Confederation of State Examining Boards, at the Chicago meeting in February.

The coming meeting of the State Medical Society will again have the privilege of recommending medical men to fill vacancies on this Board, and it is to be hoped that the House of Delegates will see to it that the names submitted to the Governor will be those of men worthy and qualified to carry on the good work the Board has begun.

Louisiana State Medical Society Notes.

In Charge of DR. JOSEPH D. MARTIN, Secretary, New Orleans.

PRELIMINARY PROGRAM FOR 1912 MEETING,

To Be Held at New Orleans, April 23, 24 and 25, 1912, at the Hutchinson Memorial, Canal and Villere Streets.

SCIENTIFIC PROGRAM.

(This is merely a preliminary outline of the program. A complete program will be mailed each member of the Society two weeks before the meeting.)

Section on Practice of Medicine—Chairman: DR. ALLAN EUSTIS, New Orleans.

"Functional Activity of the Liver, as Indicated by the Presence of Urobilinogen in the Urine," by Dr. Allan Eustis, New Orleans.

"Functional Activity of the Kidney, as Indicated by the Phenolsulphonaphthalein Test," by Dr. Joseph Hume, New Orleans.

"Diagnosis of Aneurysm of Thoracic Aorta," by Dr. Isaac Ivan Lemann, New Orleans.

"Cyclic Vomiting," by Dr. J. A. Storck, New Orleans.

"Hyperemic Treatment of Acute Anterio-Poliomyelitis," by Dr. P. A. McIlhenny, New Orleans.

"Pellagra," by Dr. C. C. Sims, Mooringsport.

"Dietetics Simplified for the General Practitioner," by Dr. F. E. Lamothe, New Orleans.

"Diagnosis and Treatment of Pellagra," by Dr. J. B. Vaughan, Colinston.

"Pellagra: Etiology, Pathology, Symptoms, Diagnosis and Treatment," by Dr. Irby B. May, Columbia.

"Influenza" (Gastro-Intestinal), by Dr. Leon J. Menville, Houma.

Section on Surgery and Anatomy—Chairman: DR. LOUIS ABRAMSON, Shreveport.

"Some Unemphasized Points in Surgery," by Dr. Louis Abramson, Shreveport.

"A Plea for the Murphy Button," by Dr. J. A. Danna, New Orleans.

"Post-Operative Abdominal Hernia; Its Prevention and Treatment," by Dr. J. C. Willis, Shreveport.

"Davidson's Operation for Cryptorchidism," by Dr. Hermann B. Gessner, New Orleans.

"Cervical Cysts of Antenatal Origin," by Dr. Thomas Ragan, Shreveport.

"Treatment of Fractures of the Head of the Femur," by Dr. Isidore Cohn, New Orleans.

"The Use of Corrective Plaster Jackets in the Treatment of Scoliosis," by Dr. E. S. Hatch, New Orleans.

"Intravenous Anesthesia," by Dr. E. L. Sanderson, Shreveport.

"Little Things That Count," by Dr. William M. Perkins, New Orleans.

"Iodoform Poisoning," by Dr. W. K. Sutherland, Shreveport.

"Cleft Palate," by Dr. John F. Oechsner, New Orleans.

"General Peritoneal Infection," by Drs. O. W. Cosby and R. H. Blackman, Monroe.

"Suppurative Pancreatitis; Report of Nine Cases," by Dr. W. T. Richards, New Orleans.

"Conservation of Tissues in Surgery of the Extremities," by Dr. Rawley M. Penick, Shreveport.

"Hepatopexy; Report of a Case; Frequency; Literature," by Dr. Louis Levy, New Orleans.

"A Case of Intestinal Obstruction," by Dr. L. G. Stifling, Baton Rouge.

"Local Anesthesia, With Especial Reference to Hernia," by Dr. Carroll W. Allen, New Orleans.

"Some Observations on the Use of the Lane Splint," by Dr. J. A. Hendricks, Shreveport.

"Observations on Vesical Calculi," by Dr. L. Sexton, New Orleans.

"Gunshot Wound of Greater Trochanter Major," by Dr. N. J. Milstead, West Jackson, Miss.

Section on Obstetrics and Gynecology—Chairman: DR. E. D. MARTIN, New Orleans.

"The Surgical Treatment of Puerperal Infection," by Dr. C. Jeff. Miller, New Orleans.

"Interstitial Pregnancy," by Dr. William Kohlmann, New Orleans.

"Abdominal Cesarean Section in Eclampsia, and in Placenta Previa," by Dr. Espy M. Williams, Patterson.

"Injuries to the Parturient Canal Incidental to Labor; Their Treatment" (lantern slides), by Dr. S. M. D. Clark, New Orleans.

"Comparative Value of Abdominal and Vaginal Examinations in Diagnosis of Fetal Presentation and Position," by Dr. W. D. Phillips, New Orleans.

"Conservatism in Gynecologic and Obstetric Surgery," by Dr. Milton A. Shlenker, New Orleans.

"Developmental Defects of the Female Genitalia; Report of Five Cases,

with Lantern Slides," by Drs. H. W. Kostmayer and Maurice J. Gelpi, New Orleans.

Section on Materia Medica and Therapeutics—Chairman: D. J. T. HALSEY,
New Orleans.

"Creosote in the Treatment of Pulmonary Tuberculosis," by Dr. C. J. Edwards, Abbeville.

Section on Genito-Urinary and Rectal Diseases—Chairman: Dr. A. NELKEN, New Orleans,

"Essential Hematuria," by Dr. A. Nelken, New Orleans.

"Residual Urine in Old Men," by Dr. S. P. Delaup, New Orleans.

"Simplified Rectal Operations," by Dr. S. L. Williams, Shreveport.

Section on Diseases of Children—Chairman: DR. W. W. BUTTERWORTH,
New Orleans.

"Diphtheria," by Dr. Solon G. Wilson, New Orleans.

"The Diarrheas of Infancy," by Dr. C. H. Rice, New Orleans.

"My Experience with Poliomyelitis, or Infantile Paralysis, as Parish Health Officer of Morehouse Parish, La., During 1911," by Dr. O. M. Patterson, Bastrop.

"Intoxication in Infancy," by Dr. M. S. Picard, Gonzales.

"Mastitis as a Cause for Weaning," by Dr. Robert A. Strong, New Orleans.

"Achondroplasia," by Dr. L. R. De Buys, New Orleans.

Section on Nervous and Mental Diseases—Chairman: DR. JOHN N. THOMAS, Pineville.

"The Rational Care of the State's Insane," by Dr. John N. Thomas, Pineville.

"The Early Signs of Locomotor Ataxia and Other Para-Syphilitic Conditions of the Nervous System," by Dr. E. M. Hummel, New Orleans.

"General Paresis," by Dr. Henry Daspit, New Orleans.

"Intramuscular Injections of Mercury (Emulsion) in the Treatment of Syphilis of the Nervous System," by Dr. L. L. Cazenavette, New Orleans.

"Psychology, from the Physician's Standpoint," by Dr. W. F. Sibley, Victoria.

Section on Ear, Nose and Throat—Chairman: DR. F. C. BENNETT,
Monroe.

"Pharyngeal Ulcer; Report of a Case with Unusual Features," by Dr. John L. Scales, Shreveport.

"Non-Poisonous Anesthesia of Mucous Membranes," by Dr. Otto Joachim, New Orleans.

"Tonsillitis in the Child," by Dr. C. O. Gray, Monroe.

"Prevention of Deafness," by Dr. Wm. Scheppegegrell, New Orleans.

"The Importance of Prompt Recognition and Treatment of Laryngeal Diphtheria," by Dr. G. C. Chandler, Shreveport.

A paper by Dr. Arthur I. Weil, New Orleans.

Cutaneous Medicine and Surgery—Chairmen: DRs. O. W. COSBY AND R. H. BLACKMAN, MONROE.

"Furunculosis, and the Rational Treatment," by Dr. John L. Kelly, Melrose.

Section on Physiology and Pathology—Chairman: DR. RANDOLPH LYONS,
New Orleans.

"The Association of Tuberculosis and Carcinoma," by Dr. William H. Harris, New Orleans.

Section on Bacteriology—Chairman: DR. O. L. POTHIER, New Orleans.
(No titles received up to March 15.)

Section on X-Ray and Electro-Therapeutics—Chairman: DR. S. C. BARROW, Shreveport.

"The Value of the X-Rays in the Diagnosis of Medical and Surgical Diseases, by Dr Amédée Granger, New Orleans

"X-Ray Pictures of Interest to the General Practitioner," by Dr. Ernest Charles Samuels, New Orleans.

"The X-Ray in the Early Diagnosis of Pulmonary Tuberculosis," by Dr. Adolph Henriques, New Orleans.

Section on Hygiene and Sanitary Science—Chairman: DR. S. D. PORTER, New Orleans.

"Economic Value to the Community of the Recent Work Against Tuberculosis," by Dr. J. George Dempsey, New Orleans.

Section on Ophthalmology—Chairman: DR. CHARLES A. BAHN, New Orleans.

"The Moving Picture and the Eye," by Dr. Charles A. Bahn, New Orleans.

"Gonorrheal Iritis," by Dr. R. F. Harrell, Alexandria.

"The Field of Vision," by Dr. M. Feingold, New Orleans.

"Non-Perforating Injuries of the Eye," by Dr. D. Fred. Waide, New Orleans.

Section on Medical Jurisprudence—Chairman: DR. T. H. WATKINS, Lake Charles.

"The Doctor in Court," by Hon. Robert Knox, Lake Charles. (By invitation of the Chairman of this Section.)

"Need of Co-Operation Between Coroners and Other Members of the Profession," by Dr. A. A. Herold, Shreveport.

CLINICAL MEETINGS.—Medical and surgical clinics will be held by some of the visiting and local physicians Friday and Saturday morning, April 26 and 27, and laboratory demonstrations will be held by the staff of the Medical Department of Tulane University, Friday afternoon, April 26.

ENTERTAINMENT.—The plan of entertainment will be outlined in the Official Program, which will be mailed to every member two weeks before the meeting.

TRANSPORTATION.—No definite answer has been received from the railroads up to the hour of closing this preliminary program, but the usual rate of one and one-third will undoubtedly be given.

GUESTS.—Among the men of national and international reputation who have been invited to attend this meeting, the following have signified their intention of coming, and will read papers on the following subjects:

Dr. J. George Adami, Professor of Pathology, McGill University, Montreal, "Sensation and Pain."

Dr. Thomas Stephen Cullen, Associate Professor of Gynecology, John Hopkins University, Baltimore, "Diseases of the Umbilicus, Apart from Hernia."

Dr. David L. Edsall, Professor of Preventive Medicine, Washington University Medical School, St. Louis, "Studies of Respiration."

Dr. Carl Beck, Professor of Surgery and Pathology, College of Physicians and Surgeons, Chicago. (Title of paper to be announced later.)

Capt. Charles F. Craig, Medical Corps, U. S. Army, has also been invited to be present.

Dr. Alexander R. Craig, Secretary American Medical Association, will attend the meeting, and will give the members a talk on some timely topic of general interest to the medical profession.

MEETINGS.—All meetings will be held at Hutchinson Memorial, Canal and Villere streets.

DUES.—Many members living in unorganized parishes have responded to the notices to remit direct to the secretary's office, but there are still some who are backward, and are urged to remit at once.

Members living in organized parishes, and who have not already done so, are earnestly requested to send their dues at once to their local secretary.

The annual dues are \$3.00, payable in advance.

IMPORTANT NOTICE TO PARISH SECRETARIES.—The terms of office of many delegates expired at the beginning of the present year. Parish officials are requested to call meetings of their respective societies at once and elect delegates. Up to the time of going to press, only about twelve parishes have sent in the names of delegates to this office. The time is short, and immediate action is imperative.

HOUSE OF DELEGATES.—The first meeting of the House of Delegates will be held at Hutchinson Memorial on Monday, April 22, at 3:30 p. m. This is in accordance with the rules of the Society that the first meeting of the House of Delegates be held on the day preceding the opening of the general session.

LOUISIANA RAILWAY SURGEONS' ASSOCIATION.—The Louisiana Railway Surgeons' Association will meet in the Hutchinson Memorial at 3 p. m., Monday, April 22. The members of the Louisiana State Medical Society are cordially invited to attend the session.

CHAILLÉ MEMORIAL NIGHT.—In accordance with resolution

adopted at the last annual meeting of the Louisiana State Medical Society, the last night of the 1912 session (Thursday) has been chosen as "Chaillé Memorial Night." On this occasion addresses will be delivered by Drs. F. W. Parham, A. L. Metz, Rudolph Matas, Isadore Dyer and Mr. George Denegre. At the conclusion of the addresses the Chaillé Memorial Bust will be unveiled.

COMMITTEE ON ARRANGEMENTS FOR 1912 MEETING OF THE LOUISIANA
STATE MEDICAL SOCIETY.

Members of the Orleans Parish Medical Society, with the following Committees actively in charge:

Chairman: DR. M. COURET.

Sub-Committees:

Executive Committee—Dr. M. Couret, ex-officio chairman; Dr. E. L. Leckert, chairman; Drs. George S. Bel, C. W. Duval, B. A. Ledbetter.

Finance Committee—Dr. B. A. Ledbetter, chairman; Drs. W. D. Phillips, J. W. Newman, J. P. Leake, E. F. Bacon, W. T. Richards, E. L. Leckert, P. T. Talbot, A. Weber, M. T. Lanaux, H. B. Seebold, W. H. Harris, T. R. Burt, T. J. Dimitry, A. H. Letten, F. Temple Brown, J. Frank Points, J. T. Wolfe, A. O. Hoefeld.

Transportation—Dr. W. H. Seemann, chairman; Drs. W. W. Leake, Wm. M. Perkins, L. R. DeBuys, P. T. Talbot, Marion Souchon, E. Denegre Martin.

Hotels—Dr. John Callan, chairman; Drs. Edmund Moss, L. Sexton, C. V. Unsworth, R. J. Mainegra, Jr., W. W. Leake, S. K. Simon, J. J. Wymer.

Halls and Meeting Places—Dr. W. W. Butterworth, chairman; Drs. L. L. Cazenavette, P. L. Thibaut, Henry Daspit, I. I. Lemann, Adolph Henriques, John F. Oechsner, Wm. Kohlmann.

Commercial Exhibits—Dr. P. T. Talbot, chairman; Dr. C. P. Holderith, vice chairman; Drs. W. H. Harris, F. R. Gomilla, James A. Henderson, J. Fred. Dunn, C. C. Bass, W. W. Calhoun, Philip Asher.

Printing and Advertising—Dr. Joseph Levy, chairman; Dr. Howard D. King, vice-chairman; Drs. Paul J. Gelpi, C. William Groetsch, Amédée Granger, C. F. Gelbke.

Program—Dr. Joseph D. Martin, ex-officio chairman; Dr. E. W. Mahler, chairman; Drs. A. B. Moise, J. J. Ryan, W. A. Gillaspie.

Registration—Dr. G. Farrar Patton, chairman; Drs. J. T. Scott, A. J. Babin, Isidore Cohn, J. George Dempsey, C. L. Eshleman, E. S. Hatch.

Badges—Dr. O. L. Pothier, chairman; Drs. P. B. Salatic, R. D. Schimmelpfennig, Walter Tusson, J. S. Hebert, A. D. Mouledous.

Entertainment—Executive Committee.

Reception Committee—Dr. Homer Dupuy, chairman; Drs. C. W. Allen, J. Barnett, M. Earl Brown, J. M. Batchelor, C. N. Chavigny, S. M. D. Clark, Frank J. Chalaron, J. J. D'Aquin, S. P. Delaup, E. D. Friedrichs, C. A. Wallbillich, Allan Eustis, A. B. Gaudet, Maurice J. Gelpi, H. B. Gessner, E. J. Graner, Ralph Hopkins, Hamilton P. Jones, A. A. Keller, Louis Levy, Randolph Lyons, C. P. May, R. A. Strong.

Committee on Stunts—Dr. Lucian H. Landry, chairman; Drs. Ben. W. Chamberlin, L. B. Crawford, Jerome E. Landry, H. W. Kostmayer, Henry Daspit, Joseph D. Martin, J. Moore Soniat, Homer Dupuy, E. M. Hummel.

Committee on Guests—Dr. Isadore Dyer, chairman; Drs. Rudolph Matas, F. W. Parham, C. Jeff. Miller, E. Denegre Martin, E. S. Lewis, Charles Chassignac, J. B. Elliott, Jr., George S. Bel, J. T. Halsey, J. D.

Weiss, E. M. Dupaquier, M. J. Magruder, C. W. Duval, A. L. Metz, Irvin Hardesty, Amédée Granger, M. Feingold, P. E. Archinard, W. H. Seemann, E. D. Fenner, Otto Joachim.

Clinical Meetings—Dr. Allan Eustis, chairman; Drs. W. W. Butterworth, E. Denegre Martin, George S. Bel, W. H. Harris, Ralph Hopkins, C. Jeff. Miller, P. J. Kahle, Victor C. Smith, R. C. Lynch, J. D. Weiss, J. W. Newman, J. B. Elliott, Jr., Solon G. Wilson, M. A. Shlenker.

Chaillé Memorial—Dr. R. O. Simmons, ex-officio chairman; Dr. Ernest S. Lewis, chairman; Dr. Rudolph Matas, vice-chairman; Drs. John Callan, F. W. Parham, Isadore Dyer, A. L. Metz, Charles Chassignac, E. H. Walet, E. L. Leckert, A. W. DeRoaldes.

Committee on Ladies' Entertainment—Mrs. F. W. Parham, chairman; Mrs. A. L. Metz, Mrs. John Callan, Mrs. Isadore Dyer, Mrs. B. A. Ledbetter, Mrs. Rudolph Matas, Mrs. E. Denegre Martin, Mrs. H. Dickson Bruns, Mrs. Allan Eustis, Mrs. E. H. Walet, Mrs. S. M. D. Clark, Mrs. J. T. Halsey, Mrs. L. R. DeBuys, Mrs. M. A. Shlenker, Mrs. C. W. Duval, Mrs. George S. Bel, Miss Alice Leckert, Mrs. M. Couret, Mrs. Edmund Moss, Mrs. W. H. Seemann, Mrs. W. W. Butterworth, Mrs. Ernest S. Lewis, Mrs. John F. Oechsner, Mrs. H. B. Gessner, Mrs. G. Farrar Patton, Mrs. O. L. Pothier, Mrs. Howard D. King, Mrs. Otto Joachim, Mrs. F. A. Larue, Mrs. Chas. Chassignac, Mrs. P. E. Archinard, Mrs. R. A. Strong, Mrs. Homer Dupuy, Mrs. H. S. Cocram, Mrs. C. Jeff. Miller, Mrs. I. I. Lemann, Mrs. J. B. Guthrie, Miss Clara Holderith, Mrs. P. J. Gelpi, Mrs. C. C. Bass, Mrs. A. W. DeRoaldes.

Medical News Items.

TUBERCULOSIS CONGRESS.—The National Association for the Study and Prevention of Tuberculosis has announced the names of six delegates designated by the United States Government to represent the United States at the Seventh International Congress on Tuberculosis, April 14 to 20. The delegates appointed are: Mr. Henry Barton Jacobs, Baltimore, secretary of the National Association for the Study and Prevention of Tuberculosis; Dr. Livingston Farrand, New York, executive secretary of the association; Dr. Charles L. Green, St. Paul; Dr. G. Walter Holden, Denver; Dr. Gerald B. Webb, Colorado Springs, and Wm. H. Baldwin, Washington, all directors of the National Association. An exhibit on tuberculosis, showing what the United States has accomplished, has been sent to Rome for display during the Congress.

NO INCREASE IN CONTAGIOUS DISEASES.—The report published that the State bacteriologist's record for 1911 showed an increase in contagious disease in Louisiana, particularly as regarding tuber-

culosis and hookworm, was deprecated by Dr. Oscar Dowling of the State Board of Health, who declared that this report was altogether out of keeping with the facts, as shown in Dr. Archinard's records of his bacteriological work for this board in 1911. "A great increase in the number of cases handled by no means stands for the proposition that contagious disease was any more prevalent in 1911," said Dr. Dowling.

MEMORIAL TO DR. RHETT GOODE.—The friends of the late Dean of the Medical Department of the University of Alabama propose erecting a bronze tablet to his memory, the funds for the same to be raised by subscription among the alumni and friends of the school.

DOCTORS WANTED.—At a recent meeting of the New York Academy of Medicine a number of addresses were delivered by medical missionaries in which the need of trained physicians was emphasized. In Persia there are only thirty doctors to 9,000,000 inhabitants; in Korea, thirty-six to 12,000,000; in Chili, one physician to 3,225; in Bolivia, one to 10,000. The opportunities for the younger generation of physicians would seem great.

CHICAGO MEDICAL SOCIETY PROGRAM.—There is to be held in Chicago, April 17, 18, 19, 1912, a meeting under the auspices of the West Side Branch of the Chicago Medical Society and the Chicago Medical Society for the purpose of discussing mental diseases in their various phases. Alienists and Neurologists from different States are asked to participate.

AMERICAN UROLOGICAL ASSOCIATION.—The annual meeting of this Association will be held in New York City on April 2, 3 and 4. This promises to be the largest and most enthusiastic meeting ever held. The number and variety of clinics and demonstrations on Tuesday, Wednesday and Thursday mornings will be a very attractive feature of this meeting. A fine opportunity will be offered to visiting members of witnessing the work in various New York clinics and laboratories.

OPENING OF THE NEW DISPENSARY BUILDING OF THE PHILADELPHIA POLYCLINIC.—The opening of the new dispensary building of the Philadelphia Polyclinic was celebrated on February 5, 1912, by

a formal reception tendered by the President of the Board of Trustees, Mr. Herbert L. Clark, to the Board, the Incorporators of the Hospital and the members of the Medical Staff.

The new building has been made possible only through the generous support of public-spirited citizens, the untiring efforts of its Board of Trustees, and generous appropriations of the Legislature of the State of Pennsylvania.

It is located on the property adjoining the older building.

Philadelphia shares the distinction with three other cities—New York, Chicago and New Orleans—in possessing this sort of an institution solely in the interest of graduate physicians.

NATIONAL COMMITTEE FOR MENTAL HYGIENE.—After three years' work in perfecting plans, the National Committee for Mental Hygiene announced its full organization and outlined its proposal to conduct a systematic campaign throughout the United States for mental hygiene. It is the first movement of such dimensions undertaken in any country, so far as known.

TO USE BALANCE FROM FEVER FUND.—It has been announced by T. P. Thompson, chairman of the committee in charge of the Fourteenth Ward yellow fever fund of 1905, that there was an unused balance of \$1,400, and that, in the absence of objection on the part of contributors before March 15, 1912, the unexpended balance will be used to establish a fund for the purchase of books for the Department of Tropical Medicine at Tulane University, such fund to be specially commemorative of Drs. Reed, Lazear and Carroll, martyrs to the yellow fever cause.

FINDS DEADLY GERM.—Capt. W. S. Patton, assistant director of the King's Institute for Preventive Medicine in Madras, has discovered complete developments of the parasite of kala-azar, or black fever, in Indo-European bed-bugs. All that has been certain hitherto was that the disease probably was transmitted by a blood-sucker or dirt-eater, such as the bed-bug, mosquito, tick, flea, louse or fly. Evidence of Capt. Patton's discovery will be awaited with greatest interest by medical men and all interested in the welfare of tropical populations.

SWISS SPECIALIST CURE FOR GOITER.—Prof. A. Kocher, the famous surgeon of Berne, Switzerland, in an interview with one of

the London papers, told of his remarkable success in the new treatment of goiter, which consists in withdrawing from functional activity part of the thyroid gland in the neck. In 800 cases only 30 per cent. resulted in death. Prof. Kocher stated that the operation should be undertaken only in the early stage of the disease before the heart is affected.

COMMON STABLE FLY INFANTILE PARALYSIS CARRIER.—In an attempt to trace the spread of infantile paralysis in the recent epidemic, two Massachusetts health officers investigated 88 cases in 17 communities, and have found reason for believing that the disease was carried by the common stable fly, *Stomoxys calcitrans*. This fly and the mosquito were the only biting insects to be found in the vicinity of the patients.

NOVOCAIN AS A LOCAL ANESTHETIC.—A Boston surgeon declares that novocain, as a local anesthetic, is only one-seventh as dangerous as cocain. When injected into the spongy bone about a tooth it gives immediate insensibility, making work about the nerve painless for half an hour or more, and it is claimed to be making ether and chloroform quite unnecessary for dentists.

NEW DEAN FOR MEDICAL DEPARTMENT OF UNIVERSITY OF ALABAMA.—Dr. Eugene Bondurant, Mobile, has been appointed dean of the University of Alabama, Medical Department, vice Dr. Rhett Goode, deceased. Dr. Bondurant has been connected with the Medical College for many years, and his appointment is well deserved.

THE ORLEANS PARISH MEDICAL SOCIETY HAS ANNOUNCED THE FOLLOWING officers and committees for 1912:

Board of Directors—Eugene H. Walet, president; Charles N. Chavigny, first vice-president; L. R. DeBuys, second vice-president; L. L. Cazenavette, third vice-president; M. Thomas Lanaux, secretary; F. R. Gomilla and W. D. Phillips, recording secretaries; William H. Block, treasurer; Homer Dupuy, librarian; S. M. D. Clark, M. Feingold and B. A. Ledbetter, additional members Board of Directors; assistant librarian, Mr. George Augustin.

Delegates to Louisiana State Medical Society—George S. Bel, Charles Chassignac, C. W. Duval, Isaac Ivan Lemann, William H. Seemann (1911 and 1912), A. B. Brown, John Callan, E. J. Graner, E. W. Mahler, Wm. M. Perkins, W. T. Richards, S. M. D. Clark, Urban Maes (1912 and 1913).

Committees—Judiciary: A. B. Brown, chairman; J. A. Danna, vice-chairman; J. M. Elliot, C. A. Bahn, J. S. Hebert, J. G. Dempsey, A. Nolte.

Scientific Essays—John Smyth, chairman; Howard D. King, vice-chairman; W. H. Harris, T. J. Dimitry, P. B. Salatich, Frank J. Chalaron, E. L. Leckert, Amédée Granger.

State Medicine and Legislation—W. H. Seemann, chairman; Isadore Dyer, vice-chairman; J. N. Roussel, E. J. Graner, W. T. O'Reilly, P. E. Archinard, W. T. Richards, W. W. Butterworth.

Public Health—E. D. Martin, Chairman; J. D. Weis, vice-chairman; A. C. King, H. P. Jones, J. F. Oechsner, E. M. Hummel, L. M. Provosty, Adolph Henriques.

Publication—M. Thomas Lanaux, ex-officio chairman; Homer Dupuy, W. H. Block.

House—Chas. Chassaignac, chairman; L. R. DeBuys, S. P. Delaup.

Library—Homer Dupuy, ex-officio chairman; E. M. Dupaquier, vice-chairman; C. W. Duval, H. N. Blum, F. W. Parham, G. F. Patton, Marion Souchon, H. B. Gessner.

Auditing—M. H. McGuire, chairman; S. W. Stafford, A. A. Keller.

Mortuary—F. A. Larue, chairman; J. O. Weilbaeher, C. V. Unsworth, W. G. Troesch, J. A. Storck, P. T. Talbot, A. S. Yenni, J. T. Scott, J. M. Soniat, J. W. Newman, O. L. Pothier, Hermann Oechsner, A. J. Babin, J. I. Hunter, A. H. Letten.

Secretary's Report—M. Couret, chairman; G. F. Cocker, C. G. Cole, Philip Asher, C. C. Bass, J. B. Larose, Hamilton Tebault, M. D. Haspel.

President's Report—Wm. M. Perkins, chairman; M. J. Magruder, Walter Tusson, Samuel Logan, A. Jacoby, Randolph Lyons, J. J. Ryan, Victor C. Smith, E. P. Lowe, E. D. Friedrichs.

Librarian's Report—Wm. Scheppegegrell, chairman; J. B. Elliott, Jr., J. T. Crebbin, Nemours Caire, C. Wm. Groetsch, O. Joachim, L. S. Charbonnet, L. H. Landry, J. W. Cirino, J. D. Martin, W. J. Durel, J. B. Hart.

Treasurer's Report—Isaac Ivan Lemann, chairman; A. E. Fossier, L. DePoorter, Wm. Kohlmann, W. A. Gillaspie, John Laurans, C. F. Gelbke, A. Ficklen, A. G. Friedrichs, J. Barnett, J. F. Points, L. C. Chamberlain, Arthur Caire.

DEDICATION OF NEW MEDICAL LABORATORIES.—The trustees and the Faculty of the University of North Carolina have issued invitations for the dedication of the New Medical Laboratories on May 8, 1912.

THE INTERNATIONAL DERMATOLOGICAL CONGRESS meets in Rome April 7 to 12. The general sessions will be devoted to the questions of the therapy of syphilis, the results of physico-therapy in diseases of the skin, and the subjects of blastomycosis, sporotrichosis and analogous processes.

PERSONALS: Dr. Creighton Wellman, of the Medical Department delivered a lecture in the Extension Course before the students and members of the faculty of Tulane University, on March 7.

Dr. M. A. Lischkoff has returned from Europe and hereafter will be located in Pensacola, Florida.

Major S. P. James, in the medical service of the British Government in India, spent a few days in New Orleans, in March, en route to Panama. The Major is traveling over the world in the interest of research in tropical medicine.

Dr. A. B. Brown, Secretary of the Louisiana State Board of Medical Examiners, was elected President of the National Confederation of State Medical Examining and Licensing Boards at the recent meeting in Chicago.

REMOVALS.—Dr. E. C. Day, from Los Angeles, Cal., to Arrow Root, Hot Springs, Cal.

Dr. E. L. Sanderson, from Natchitoches, La., to Shreveport.

Dr. Joseph Levy, from Berry, La., to 2027 Gen. Taylor street, New Orleans.

MARRIED.—Dr. Henry W. E. Walther and Miss Lilian Helen Cormier were married in New Orleans, on March 12, 1912.

DIED.—On February 26, 1912, at Gulfport, Miss., Dr. Gustavus Rably, aged 66 years.

On February 15, 1912, at Pensacola, Fla., Dr. Robert C. White, surgeon of the United States Marine Hospital Service, aged 70 years.

On February 15, 1912, at Vidalia, La., Dr. Samuel D. Gillespie, aged 27 years.

On February 28, 1912, Dr. R. W. Walmsley, of New Orleans, a well-known medical practitioner and a member of one of the foremost families in the South.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of respective publications. The acceptance of a book implies no obligation to review.

A Hand-Book of Practical Treatment, by Many Writers, Edited by JOHN H. MUSSER, M. D., LL. D., and A. O. J. KELLY, A. M., M. D. Vol. II. W. B. Saunders Company, Philadelphia, 1911.

The second volume of this most excellent system opens with a contribution by that most careful clinician, Sir Clifford Allbutt, on the Principles of Cardiac Therapeutics. Needless to say, the work is well done.

An excellent chapter on Typhoid Fever is contributed by Dr. Rufus I. Cole; a good one on Tuberculosis by Dr. Edward Osgood Otis, and one on Cerebro-Spinal Fever by Dr. Lewellyn F. Barker. The chapter on Leprosy, concise but pithy, is from the pen of our fellow-townsmen, Dr. Isadore Dyer.

The other contributors are Drs. John F. Anderson, Joseph C. Bloodgood, James Carroll, Clinton F. Dent, G. E. de Schweinitz, Arthur W. Elting, John M. T. Finney, Joel E. Goldthwait, Samuel McC. Hamill, Hobart Amory Hare, John H. Jopson, Charles F. Martin, Edward Martin, Alexis McGlannon, Richard M. Pierce, Charles W. Richardson, David Riesman, M. J. Rosenau, Jay F. Schamberg, Alfred Stengel, George H. Weaver, J. William White and Alfred C. Wood.

Physicians will do well to have a work of such character and magnitude within easy reach.

STORCK.

Diseases of the Stomach—EINHORN. The Fifth Revised Edition. Wm. Wood & Co., New York.

It has fallen to my lot to review several editions of Einhorn's Diseases of the Stomach. Since the first edition, in 1896, we have seen this work grow and improve. It has kept abreast of the progress in the branch of medicine of which it treats, and does credit both to American medicine and to its talented and ingenious author.

STORCK.

Hygienic Laboratory—Bulletin No. 75. Digest of comments on the Pharmacopœia of the United States of America. Eighth Decennial Revision, and the National Formulary. Third Edition.

The average physician will hardly have the time or the inclination to peruse this volume; but the intelligent pharmacist will find a world of information between its covers, and the physician will often use the work for reference.

STORCK,

Serum Diagnosis of Syphilis, and the Butyric Acid Test for Syphilis, by HIDEYO NOGUCHI, M. D., M. Sc. Second Edition. J. B. Lippincott Company, Philadelphia and London.

In this second edition of Noguchi's book much has been added and much rewritten, so as to bring the subject up to date. The same careful detail is displayed in the presentation of the matter, and, to those who did not see the first edition, this is highly commended. DYER.

Further Researches Into Induced Cell Reproduction and Cancer, consisting of paper by H. C. Ross, M. R. C. S. etc.; J. W. CROPPER, M. B., M. Sc. and E. H. Ross, M. R. C. S., etc. P. Blakiston's Son & Co., Philadelphia, and John Murray, London.

A group of correlated papers dealing with the interesting problems in cancer research, suggesting new measures for determining experimental steps in growing extraordinary cells, with certain clinical observations bearing on the subject. DYER.

Progressive Medicine. Vol. XIII, No. 4. Lea & Febiger, Philadelphia.

The usual excellent review of contemporaneous literature, in this particular volume concerning Diseases of the Digestive Tract (Lavenson), Diseases of the Kidneys (Bradford), Genito-Urinary Diseases (Bonney), Surgery of the Extremities, Shock, etc. (Bloodgood), and a practical therapeutic referendum (Landis). The surgical section is particularly noteworthy because of its scope. Excellent illustrations are used where needed. DYER.

Text-Book of Embryology, by FREDERICK RANDOLPH BAILEY, A. M., M. D., and ADAM MARION MILLER, A. M. Second Edition. Wm. Wood & Co., New York.

The demand for a second edition of this excellent work within two years of the first edition is a strong argument for its usefulness. The text is quite pretentious, covering the whole subject of embryology in a modern way. Over five hundred illustrations are used to elucidate the reading matter, which is presented in the best form. Beginning with the consideration of the unit cell, the text is an evolution of each of the developmental stages in embryology, in which comparative studies are presented to make the human subject more interesting and more clear. Detailed descriptions of individual sections of the work would be of little service, as all of the material is so excellently arranged as to make the selection of any particular chapter a difficult task. In every way a model text and reference book. DYER.

Pathologic Technique, by FRANK BARR MALLORY, A. M., M. D., and JAMES HOMER WRIGHT, A. M., M. D., S. D. Fifth Edition. W. B. Saunders & Co., Philadelphia and London.

This standard laboratory guide has been revised in another edition, bringing its contents up to modern practise. While thoroughly comprehensive, each subject is presented with the succinctness and brevity which so wide a field must necessitate. DYER.

Text-Book of Medical Jurisprudence and Toxicology, by JOHN J. REESE, M. D. Eighth Edition. Revised by D. J. MCCARTHY, A. B., M. D. P. Blakiston's Son & Co., Philadelphia.

Among the new things in this edition of Reese's Medical Jurisprudence

may be named the chapters on Insanity, in which modern classification has been adopted. Throughout such revisions have been made as have seemed necessary. The familiar arrangement of topics obtains as formerly, and the constant desire to make the book more of a text than a reference is still patent. There is still a marked absence of consideration of perversion, which should receive more attention, and, under the caption of Insanity or Unnatural Practises, now dismissed in one or two paragraphs. The custom of case instances, as presented in more pretentious works, might add to the scope and value of this book in another edition. It is none the less handy and satisfactory as a text-book, which is all it claims to be.

DYER.

A Text-Book of Physiology, by WILLIAM H. HOWELL, Ph. D., M. D.
Fourth Edition. W. B. Saunders & Co., Philadelphia.

It has been our privilege to review former editions of this model text and reference on Physiology, and we have always been struck with the arrangement of the contents. Many texts begin the conception of physiology in a unit cell, around which function and philosophy are builded. In the book before us, the motility of tissue introduces the text, and from the study of contraction to the function of nerve control the student is carried, before any of the ordinary mechanism of the body is considered. With the introduction in such a manner, the more logical appreciation of the functions of organs of general purpose and of special sense is accomplished. Fully 1,000 pages are included, and many illustrations.

DYER.

The Origin of Life, by H. CHARLTON BASTIAN, M. D., F. R. S. G. P.
Putnam's Sons, New York and London.

When I was a college student, now some twenty-five or twenty-six years ago, it was my privilege to read an essay on "Spontaneous Generation," emanating from the same source as the work now under review. The ideas then advanced seemed remarkable, in the light of the work of Huxley and of Pasteur. Dr. Bastian has kept on working at the same problems, and he now presents some excellent examples of results obtained in various ways, mostly chemical, arguing for the development of original types of living organisms without antecedent prototypes.

The papers contained in the little book before us are not conclusive, but they are entitled to consideration, because the author has had, for more than thirty years, the idea which Loeb and others have more recently set forth—that life may originate from chemical compounds, and independent of antecedent parent growths.

DYER.

Electricity: Its Medical and Surgical Applications, etc., by CHARLES S. POTTS, M. D., with a section on Electro-Physics by HORACE CLARK RICHARDS, Ph. D., and a section on X-Rays by HENRY K. PANCOAST, M. D. Lea & Febiger, Philadelphia and New York.

The scope of this work is somewhat out of the ordinary. By systematic sequence the principles of electricity are presented, with their relation to medicine, both in diagnosis and in therapy. Mechanical contrivances are explained in particular detail, not only such as may be employed in different forms for medical treatment, but also for diagnosis, as lamps, etc. A large variety of illustrations is used to elucidate the text.

The later chapters in the book are devoted to the application of the facts presented in the earlier part, as related to particular diseases or organs. Altogether an interesting and clean text on the subject covered.

DYER.

A Text-Book on Pathology, by FRANCIS DELAFIELD, M. D., LL. D., and T. MITCHELL PRUDDEN, M. D., LL. D. Ninth Edition. William Wood & Co., New York.

Many new topics are covered in this latest edition of a standard work on Pathology, and all of the matter has been brought up to date by Dr. Prudden, who accepts all responsibility for the revision, stating in the preface that Dr. Delafield is now no longer actively associated as the author of the book. Dr. Prudden has been so eminently identified with the subject of pathology in the past twenty-five years that his own name must attract the reader, even if the merits of the work itself did not deserve this consideration. Nothing has been spared in making this last edition complete in every way, including a multitude of most excellent illustrations. Technic is presented in careful detail, and the two last chapters on the post-mortem examination and the preservation of specimens deserve particular notice.

DYER.

Recent Studies of Syphilis, with Special Reference to Serodiagnosis and Treatment. Medical Symposium, Series No. 1. Interstate Medical Journal Company, St. Louis, 1911.

Certainly a good idea to collect scattered articles of value on one subject of importance in the form of a book. The present one is a reprint of articles published in the *Interstate Medical Journal*. We are glad to note among them the article of our friend, Dr. Dyer, on "The Public and Syphilis."

E. M. D.

Recent Studies of Cardio-Vascular Diseases. Medical Symposium, Series No. 2. Interstate Medical Journal Company, St. Louis.

Same remarks apply here as to Series No. 1, on Syphilis, mentioned above. But no subject of medical importance can overreach this in practical applications—referring chiefly to the social magnitude of life insurance in the hurry-scurry of modern life.

E. M. D.

International Clinics. Vol. IV. Twenty-first Series.

To be noted here in this most interesting volume, among other articles of unusual value, the sequence of Reilly's lecture on Economics of Medicine, and Jennings' short and neat, artistic to a fault, story of Edward Jenner, the man. We need plenty of such nourishing literature in short stories on the history of medicine, to show our young men, aspirants, that our great minds in medicine were those of dreamers, of poets, lovers of music and of nature pictures, gifted with power of imagination. Yet, Jenner, the country doctor, was of that kind, and we see what this plain man has done.

E. M. D.

The Surgical Clinics of John B. Murphy, at Mercy Hospital, Chicago. W. B. Saunders Company, Philadelphia and London.

The first edition of this work is just out. It is a stenographic report of Dr. Murphy's clinics held especially for physicians at the Mercy Hospital on Wednesdays and Saturdays. Those who have had the pleasure of hearing Dr. Murphy know his pre-eminence as a clinical teacher, and those who have not are now afforded an opportunity of reading these lectures. This form of literature is more in demand than ever. It brings the practitioner and the patient in more intimate contact, and the teachings of to-day are applied to the special case for which it is intended, and few teachers are better qualified to do this than Dr. Murphy. The profession is to be congratulated on the fact that he has given his consent to the publication of these clinics.

MARTIN.

A Compend of Genito-Urinary Diseases and Syphilis, by CHARLES S. HIRSCH, M. D. P. Blakiston's Son & Co., Philadelphia, 1912.

This is the second edition of one of the series of quiz-compends published by Blakiston's. Dr. Hirsch has done the work well. He has added a number of cuts and enlarged several of the chapters, notably that on Syphilis, to bring the subject up to date. The little volume is well adapted to the use of students, and is no worse than the others as far as utility to the practitioner is concerned.

The proof-reading could have been improved.

C. C.

Publications Received.

W. B. SAUNDERS COMPANY, Philadelphia and London, 1912.

The Surgical Clinics of John B. Murphy, Volume I, No. 1. February 1, 1912.

Pellagra, by George M. Niles, M. D.

P. BLAKISTON'S SON & CO., Philadelphia, 1912.

Manual of Practical Physiology, by John C. Hemmeter, M. D., Ph. D., LL. D.

Honan's Hand-Book to Medical Europe, by James Henry Honan, M. D.

F. A. DAVIS & CO., Philadelphia, 1912.

Health and Medical Inspection of School Children, by Walter S. Cornell, M. D.

LEA & FEBIGER, Philadelphia and New York, 1912.

A Treatise on Tumors, by Arthur E. Hertzler, M. D., Ph. D.

Microscopy, Bacteriology, and Human Parasitology, by P. E. Archinard, A. M., M. D. Second edition, revised and enlarged.

Physiology, by A. E. Guenther, Ph. D., and Theodore C. Guenther, M. D. Second edition, revised and enlarged.

The Surgery of Oral Disease and Malformations, by George Van Ingen Brown, D. D. S., M. D., C. M.

Progressive Medicine, Volume XIV, No. 1. Edited by Hobart Amory Hare, M. D., and Leighton F. Appleman, M. D. March 1, 1912.

Recent Methods in the Diagnosis and Treatment of Syphilis, by Carl H. Browning, M. D., and Ivy McKenzie, M. A., B. Sc., M. B., Ch. B., in collaboration with John Cruickshank, M. D., Ch. B., and Charles G. A. Chislett, M. D., Ch. B.; Walter Gilmour, M. B., Ch. B.; Hugh Morton, M. B., Ch. B., with an introduction by Robert Muir, M. A. M. D., F. R. S.

A Manual of Surgical Treatment, by Sir W. Watson Cheyne, C. B., D. Sc., LL. D., F. R. C. S., F. R. S., and F. F. Burghard, M. S., F. R. C. S.

DUFFIELD & CO., New York, 1912.

Home Hygiene and Prevention of Disease, by Norman E. Ditman, M. D.

MISCELLANEOUS.

Blair's Pocket Therapeutics, by Thomas S. Blair, M. D. (Medical Council Company, Philadelphia, 1912.)

The Taylor Pocket Case Record, by J. J. Taylor, M. D. (Medical Council Company, Philadelphia, 1912.)

Proceedings of the Fifth Annual Meeting of Life Insurance Presidents.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans
FOR FEBRUARY, 1912.

CAUSE.	White.	Colored.	Total.
Typhoid Fever.....	1	1	2
Intermittent Fever (Malarial Cachexia)	1	1	2
Smallpox.....			
Measles.....			
Scarlet Fever.....	1		1
Whooping Cough.....			
Diphtheria and Croup.....	3		3
Influenza.....	17	5	22
Cholera Nostras.....			
Pyemia and Septicemia.....	1	1	2
Tuberculosis.....	55	36	91
Cancer.....	16	4	20
Rheumatism and Gout.....	1		1
Diabetes.....		1	1
Alcoholism.....	2		2
Encephalitis and Meningitis.....	1	4	5
Locomotor Ataxia.....	3		3
Congestion, Hemorrhage and Softening of Brain.....	17	17	34
Paralysis.....	3	1	4
Convulsions of Infants.....			
Other Diseases of Infancy.....	13	3	16
Tetanus.....	3	3	6
Other Nervous Diseases.....	6		6
Heart Diseases.....	83	49	132
Bronchitis.....	10	1	11
Pneumonia and Broncho-Pneumonia.....	40	42	82
Other Respiratory Diseases.....	4	4	8
Ulcer of Stomach.....		1	1
Other Diseases of the Stomach.....	3	6	9
Diarrhea, Dysentery and Enteritis.....	10	8	18
Hernia, Intestinal Obstruction.....	6	1	7
Cirrhosis of Liver.....	6	1	7
Other Diseases of the Liver.....	3	1	4
Simple Peritonitis.....		3	3
Appendicitis.....	1	1	2
Bright's Disease.....	44	27	71
Other Genito-Urinary Diseases.....	7	8	15
Puerperal Diseases.....	2	2	4
Senile Debility.....	15	8	23
Suicide.....	3	2	5
Injuries.....	25	17	42
All Other Causes.....	30	14	44
TOTAL.....	436	271	707

Still-Born Children—White, 16; colored, 28; total, 44.

Population of City (estimated)—White, 272,000; colored, 101,000; total, 373,000.

Death Rate per 1000 per annum for Month—White, 19.23; colored, 32.20; total, 22.74.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 30.05
Mean temperature 52.00
Total precipitation 3.73 inches.
Prevailing direction of wind, northwest.

New Orleans Medical and Surgical Journal.

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No. 11

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

Outline of the Care of the Obstetrical Patient in the Allgemeine Krankenhaus Frauenklinik, Vienna, 2nd. Division.

By MILTON A. SHLENKER, M. D., New Orleans.

Having enjoyed the privilege of being one of the *volunteer* assistants in this wonderful institution, I thought that it might be of general interest to briefly narrate some of the procedures carried out in this great clinic.

In this department—that is, the entire obstetrical service—there are over twelve thousand deliveries annually, and this is unquestionably one of the largest maternity hospitals in the world. Being under governmental control, the material is at the disposal of the medical department of the University of Vienna for teaching purposes.

The Frauenklinik is divided into three sections, the first and second divisions being under the care of the university professors, while the third is devoted to obstetrics alone, and for the instruc-

* Read before the Orleans Parish Medical Society, February 12, 1912.

tion of midwives and, is under the direction of Professor Pischyk.

Frauenklinik No. 1 is under the direction of the eminent teacher, Professor Schauta, whose work and name are familiar to all who are at all interested in the diseases of women. His principal assistants are Drs. Christofoletti, Adler, Thaler, while Dr. Fränkel has charge of the pathological laboratory.

The second division is under the guidance of Professor Wertheim, who succeeded the late Von Rosthorn (and he, in turn, the late Chobrak), and it is to him I am indebted for my appointment and for the privilege of serving in this great institution. It is well known that Professor Wertheim popularized and improved the technic of the radical operation for carcinoma of the uterus which bears his name. He is ably assisted by Drs. Wagner, Weibel and Werner, and the eminent pathologist, Professor Schottlander, directs the laboratory.

ADMISSION.—Any person, regardless of whom she may be, can be admitted without any question, provided she is anywhere from the thirty-second to the thirty-sixth week of gestation. On their admission they are given a thorough tub-bath, which is repeated every second day, and also given a complete change of clothes, which they wear during their stay in the institution. Of course, a minute history is taken of every case, and a thorough physical examination given, including a careful noting of the pelvic measurements. The urine is examined for any abnormalities that may be present, and this is repeated every third to fifth day. An examination of the secretions of all patients suffering from a vaginal discharge, and those cases suffering from any contagious disease are isolated in a separate ward.

After having gone through this routine examination, those patients while remaining in the hospital must assist with the work about the place, such as cleaning, scrubbing, etc. In fact, they do all that is required of them in the way of ordinary housekeeping, provided their physical condition permits. They sleep in a regular ward and are supposed to help about the premises as long as they are physically able. When they begin to have labor pains they are permitted to take to their bed and remain there until the labor is well advanced. After the labor pains are well established they are brought into the Kreis-saal, or delivery room. This Kreis-saal corresponds to one of the regular wards, but is reserved only for

those patients who are surgically clean and are in actual labor. Patients suffering with any contagious infection are delivered in a special room set aside for this purpose. Connected with this Kreis-saal are two complete operating and sterilizing rooms. After delivery, and the patient has fully recovered from the shock and discomfort attending the birth of a child, they are taken on a ward carriage, with their babies, and wheeled into one of the postpartum wards, where they remain until they are discharged. In the postpartum wards each bed has a small baby-bed, in which the baby is placed. The bed is made so as to hook on either the foot or side of the bed, so as to be accessible for the mother to reach. Each baby receives a freshly-made excelsior mattress, which is burned after their departure.

During the antepartum period these patients are utilized by the assistants for teaching the students of the university.

With the onset of labor the patient is brought into the Kreis-saal and the external genital organs are scrubbed with soap and water, and afterwards irrigated with a solution of bichloride of mercury. As a rule, the majority of patients are delivered in the lateral position, and all normal deliveries are made by midwives under the direction of one of the assistants, and their work is of a high character and most excellently performed. All pathologic conditions are treated by one of the assistants. Episiotomy is very frequently performed. By this, I mean only when laceration is inevitable. These are immediately repaired with silk sutures, as are all lacerations of the vagina.

Early rising after delivery has been in practice for quite a while in this clinic. Patients, within the first twenty-four hours after their delivery, in absence of any serious complications, are permitted to get out of bed, say ten minutes the first day, and then twenty minutes, morning and evening, the second day, and the following days they may be up and about as much as they desire. Throughout this period they are carefully watched for any variation from the normal. Their temperature and pulse noted three times daily, and should there be the slightest disturbance they are promptly returned to their beds. Superficial lacerations are not considered a contraindication to early rising, though those having had deep lacerations are kept in bed till the sixth day. As a rule, the patients are discharged from the hospital on the tenth day.

Those not having homes are sent with their babies to an asylum, which is maintained by the Government, and are permitted to remain there until the baby is ready to be weaned, when the mother is permitted to leave, with or without her offspring, as she may desire. These children are raised in this institution, and are kept till old enough to be sent out, and then they are usually adopted by the peasants, who rear them and use them, when they grow older, as domestics, etc. It may be interesting to know that, out of the vast number of deliveries, at least 75 per cent of the children born are of illegitimate birth.

The placenta is never expressed except when some special indication warrants it, such as eclampsia, hemorrhage and temperature. The uterus is never manipulated nor massaged, but is left alone to expel its contents, for it has been the experience in this clinic that any interference predisposes to a hemorrhage. The uterus is carefully watched to see that it contracts properly, and only when there is a degree of inertia and resulting bleeding is it slightly massaged and ergot administered.

Uterine stimulants to promote antepartum pains are seldom employed, but those that have given most satisfaction are quinin, given in five-grain doses, and sugar, in fifteen grams, repeated in ten minutes, too, has been observed to give marked uterine contractions antepartum. This action has been observed fifteen minutes after administration.

The breasts during the antepartum period are simply kept clean and bathed occasionally with a solution of boracic acid or alcohol. In every case, every mother who is physically able is urged to nurse her baby, and when the secretion is absent or diminished every effort is made to establish the flow of milk, and most excellent results have been obtained by producing a hyperæmia with a Bier cup. A large globe, covering the entire gland, is applied daily for about ten minutes, and the results have been most gratifying. Of course, this is used in conjunction with a liberal milk diet and an occasional tonic. Where there is a hypersecretion of milk, and the child is unable to empty the breast, which has become over-distended, the glands are sufficiently evacuated by the Jaschke pump so as to allow the infant to grasp the nipple, and, in addition, the patient is put on a restricted diet and given a saline purgative.

It is customary not to give the child the breast for the first

twenty-four hours. If the baby is fretful and crying, they are usually given a little saccharin in water, which, as a rule, will satisfy them, though this is seldom required. It is expected of the ordinary healthy child to empty the breast at each nursing, which usually requires from fifteen to twenty minutes. In the event that the infant is a weakling and unable to secure its own nourishment, it is drawn from the breasts with a pump and fed to the child, either with a dropper or from a bottle.

Should the death of the baby occur, and the breast of the mother become engorged, she is at once placed on a restricted liquid diet and given a saline cathartic. The breasts are supported with a binder. For pain, an ice-bag is applied, and only occasionally is an anodyne given, or drugs applied locally. The breasts, in these cases, are never mechanically emptied.

On the birth of the baby, if it does not begin the function of respiration at once, after the mucus has been wiped from their throats they are suspended by their feet and given gentle taps on their buttocks, which, as a rule, will excite the proper stimulus. When this is unsuccessful and the asphyxia is imminent, the mucus is aspirated from the trachea with the v. Rosthorn aspirator, and then the child is again held by the feet and again given several taps on the buttocks and back, and if this is not successful they are placed within a warm blanket and the heart massaged, or possibly given the Schultze swing, and, as a last resort, artificial respiration is tried, together with inhalation of oxygen gas. No case is considered hopeless until at least half an hour has been spent trying to induce the respiratory rhythm.

The baby is protected from exposure until the mother has been properly cared for, after which it is thoroughly rubbed with oil or vaselin and given a full bath, and no other full bath is given until the umbilicus has healed. The cord is at first simply clamped, till the proper attention is given to the mother, after which it is ligated as close as possible to the abdominal wall and cut short and dressed with a mildly antiseptic drying powder. Premature children are placed in an incubator room, which will accommodate from six to seven babies.

DOUCHES.—As a rule, no antepartum douches whatsoever are given, with the exception, perhaps of those patients suffering from a profuse discharge, or found to be infected. This is also the case

during postpartum period, except the external genitals are irrigated, unless there is a special indication, such as foul-smelling discharge, temperature, etc.; then one, or perhaps two, intra-uterine douches are given of a weak solution of lysol, or of a hot 95% irrigation of alcohol, and this is omitted if there is the least question of a doubt if there is any infection of the adnexa or parametrium. Generally, no vaginal douche is advised till the tenth day postpartum. Constipation is usually treated by an enema of soapsuds and water, or the patient is given an occasional dose of infusion of senna. Diet is usually a very liberal one. After their delivery they are allowed milk and rice, which is given at frequent intervals until the third day, when full diet is allowed.

Hemorrhage, when due to placenta previa, excellent results have been obtained by the use of the colpeurynter, which is introduced through the membranes into the uterine cavity and then filled with water, and traction made on the bag. When unsuccessful with this procedure a Braxton-Hicks version is performed, bringing down a thigh without extraction of the body, letting the thigh act as a tampon. In those cases where the hemorrhage is due to a premature separation of the placenta, the uterine cavity is evacuated at once.

POSTPARTUM.—When due to retained products of conception, a curettage is performed. In uncontrollable bleedings from the uterine cavity, the Momburg constrictor has been used. While the results have been good, the use of this constrictor has not been looked upon with much favor in this clinic, as it has been shown experimentally that it causes injury to the kidneys and their blood vessels, and on removal of the tubing a general collapse has followed. By far the best results have been obtained in this clinic from the use of the intra-uterine tamponade.

Of the drugs used, are principally pituitarin and ergot. The former drug causes a hyperexcitation of the unstriated muscular fibres of the uterus, which effect is augmented by the addition of the ergot. Sometimes, in mild bleedings, the simple traction of the cervix with a volsellum will arrest the flow.

ECLAMPSIA.—In the treatment of this grave condition, great confidence has been placed in the treatment suggested by Stroganoff, who claims a maternal mortality of 6.6% and a fetal mortality of 21.6%, which is, briefly stated, as follows: On arrival of the

patient in the institution she is given a hypodermic of morphin, gm. 015, and then isolated in a room that is dark and very quiet, seeing that her body is well covered and kept warm. No hot water bottles are applied, for they irritate the skin. If the colon is loaded with feces, she is given an enema of soap and water. Before making any examinations whatsoever, or catheterizing her bladder, the patient is given sufficient chloroform to dull her sensibilities. During a seizure, the chloroform is combined with oxygen. One hour after the first injection of morphin is given, two grams of chloral hydrat are given per rectum (usually in an emulsion). One hour later the chloral is repeated, and two hours later the morphin—that is, if a convulsion is imminent. All manipulations are done under the influence of chloroform.

We then content ourselves to wait three or four hours, and if we have succeeded in arresting an eclamptic seizure we usually wait until the os dilates and then deliver. When the pulse ranges from 112 to 120, digalen or digitalis is given. He recommends bleeding only when there is a pulmonary edema.

In unsuccessful cases vaginal Cesarian section is performed, and only occasionally the Bossi dilator is used, for this treatment is not looked upon with much favor in this clinic.

PELVIC DEFORMITIES.—This clinic is rich in all sorts of pelvic deformities, especially those consequent to rachitis, and it seems there is a locality in southern Austria where osteomalacia seems to be prevalent, due to some climatic condition or to the waters. In Vienna it is the custom to treat these cases very conservatively, especially the contracted form of pelvis, and, as a rule, their patience is rewarded with a spontaneous delivery and a healthy child and well mother. This treatment is strongly contrasted by a visit to the German clinics, which are usually very radical, and resort to instrumental or operative measures in these conditions. While the progress is somewhat tedious in these cases, it has been observed that the head will gradually adapt itself to the pelvis, and eventually present itself for delivery without much difficulty. It has been found in those cases of contracted pelvis where the pains are good and strong and manifested in the lower uterine segment, that the use of the Welcher position, which will increase the antero-posterior diameter, will materially aid and hasten the delivery.

In the extremely high grades of contraction, and in these cases

of osteomalacia, the Cesarian section is performed, both the intra and extra-peritoneal form, the latter being reserved for those cases where there is no question of infection being present. For the pains which usually manifest themselves in osteomalacia, pituitarin has been used with fairly good results.

Pubiotomy has fallen into some disfavor in this clinic, and is used only in the multipara, owing to the extensive lacerations of the parts following its use in the primipara.

In vomiting of pregnancy, when not due to some specific intoxication or mechanical disturbances, such as displacements, the following is the plan of treatment used: First, the patient is given a thorough purge and then isolated and given absolute rest in bed and fed on small quantities of milk, usually 20 to 30 c. c., every twenty minutes, and in addition to this a small amount of alkaline water to drink. Drugs are seldom employed, but, when used, anesthesin has given best results.

For the interruption of pregnancy when due to such conditions as chronic nephritis and tuberculosis, etc., the laminaria is almost invariably employed. In pyelitis, which is quite a frequent complication of pregnancy, and but seldom recognized, the patient is placed on the side opposite to the affected side, so as to relieve the pressure of the uterus on the ureter. The patient is kept on a strictly milk diet, with plenty of alkaline drinks. The simple catheterization of the ureter and irrigation with a dilute solution of one of the silver salts will afford prompt relief.

In this paper I have tried to briefly outline some of the procedures in this clinic, where one has material in abundance and opportunities galore for observation, and where no plan of treatment is advocated until it has been carefully studied and found to be of worth, and I trust that it may prove of value to those who are interested in this line of work.

A Study of Brain Tumors.

By E. M. HUMMEL, M. D., New Orleans.

With the exception of the female generative system, no tissue of the body is perhaps more prone to the development of tumor processes than the cerebral substance. At any rate, the incidence of brain tumor is great enough to constitute this one of the very

frequent grave affections of the central nervous system, and so often does it go unrecognized in its early stages, when surgical treatment especially is of most avail, that a discussion of the subject seems profitable, even though one may be found repeating many common-places quite familiar to those who have paid much attention to the subject.

It is not a matter of such great difficulty to recognize that the cerebral mass is involved in disease, because our knowledge of its general and special functions is now rather definite in many respects, and usually when the central nervous system is implicated through the circulation in toxic processes originating elsewhere in the body the presence of the latter, and the manner in which it is operating to secondarily involve the brain, is so obvious as to not give rise to confusion. And again, with reference to lesions of the central organ from rupture and disease of the vessels, degenerative processes, the results of trauma, encephalitis, inflammatory conditions of the brain and involving membranes, none of these are likely to be confused with true tumor formations in the brain substance proper if the history is shown and if sufficient care is exercised in the examination. Two diseases form possible exceptions to this—namely, multiple sclerosis and general paresis. However, a close analysis of the facts pertaining to the history and the symptoms even in the latter will usually obviate confusion.

It is not, then, so much the question of distinguishing tumor from other lesions that makes the study of cerebral neoplasms such an intricate one, as the recognition of the very presence of small or incipient growths, their nature and location, their amenability to medication and surgical treatment and the consequent prognosis. However, a detailed consideration of the various data that have been collated within comparatively recent years relative to the focal diagnosis of lesions of the brain would be beyond the scope of this paper. It, therefore, seems most useful to adapt the present discussion to the more practical phases of the subject, to the exclusion of such neurological refinements, many of which still remain of uncertain and doubtful value.

As regards the chief symptoms pointing to the presence of intracranial growth, many of these have long been familiar subjects of medical study. The one most frequent sign of the presence of neoplasm within the cranium is headache. In determining the value

of this symptom we must attempt to distinguish the peculiarities of cephalalgia produced by progressive organic disease. In the first place, the pain, though produced by a constantly acting cause, is notoriously intermittent in its early stages. This must be explained by the fact that the intracranial circulation is capable of shifting and adjusting itself to the encroachments of pressure, not only by varying the quantity of fluid and lymph within the cranial cavity, but by distribution of these fluids to particular parts in the tissues. It should be borne in mind that direct injury to the brain substance proper does not produce pain, but that the enveloping membranes are highly supplied with pain corpuscles and fibers, and these, when stretched or pressed upon, may give rise to most excruciating and overwhelming pain. This is the explanation of the fact that anything that tends to relieve intracranial pressure, such as spinal puncture and free purging of the bowels, has a tendency to lessen these headaches. The fact that the headache is intensified by sneezing, coughing, stooping, straining, etc., is explained in the same way. If the meninges are implicated in the disease directly, the pain is usually constant and localized. The headache of brain tumor, when it has assumed a certain intensity, is very little influenced by the ordinary pain-destroying drugs not even yielding to opiates unless same are given in large enough doses to blunt the psychic appreciation of pain. Such headaches are variously described as boring, grinding, crushing in character. The pain may be limited to certain portions of the head, but most frequently, when it is intense, it is generalized. Circumscribed tumors have sometimes been known to produce headaches localized to their site, and sensitiveness of the scalp to pressure and percussion over the tumor has also been noted, especially when the tumor is near the surface and the bone has become involved by erosion, or as above inferred. But such symptoms are unreliable and should be interpreted with caution in establishing a focal diagnosis. Tumor headache, when intense, overwhelms the subject to such an extent as to partially inhibit cerebration, and the subject prefers to remain perfectly quiet in a darkened room, any kind of nervous activity being disagreeable. An experienced neurologist learns to recognize something characteristic about the facies of a patient suffering from these headaches, as the face wears a certain impress of suffering not seen in any other condition. At the height of the headache

cerebral vomiting is most apt to occur. This might take place, however, independent of cephalalgia. Although vomiting is regarded as one of the frequent signs of brain tumor, my experience in the careful observation of some nineteen cases would indicate that this symptom is not of great frequency.

Cerebral vomiting is indeed a rather rare occurrence. On the other hand, various disturbances of consciousness in incipient tumor have in my experience been rather more frequent than ordinarily regarded. Some of the strangest things can happen in this regard, and such may vary anywhere from simply momentary suspensions of consciousness to prolonged somnolence, with or without neglect of the organic necessities. Such disturbances are exceedingly difficult to distinguish from the so-called functional manifestations of hysteria and epilepsy. Indeed, I do not know of any more difficult question of solution than that of determining between a beginning idiopathic epilepsy and the incipency of brain tumor. Beginning brain tumors might give no indication of their presence otherwise than the production of purely epileptoid seizures. Of course, when the epilepsy is Jacksonian in type, suspicion is immediately directed to a lesion, but, inasmuch as the motor areas constitute only a small portion of the brain area, such significant symptoms are comparatively rarely present. The possibility of developing tumor should always be kept in mind in cases of epileptoid seizures developing suddenly, especially in adult life.

A case came to me last summer with the sole symptom of occurrence of brief partial suspensions of consciousness (five to ten seconds), resembling very much the small seizures of epilepsy. Conditions were such as to make it absolutely impossible to determine between an organic condition and epilepsy. Suspicion was directed towards some progressive organic disease on account of the man's age (45 years), and a negative family and personal history for epileptic or any allied neurosis. This man died of the symptoms of brain tumor last December, as I was recently informed from his home in Texas.

About three years ago I reported, in a group of three cases of pathological sleep (all of which were at the time without sign of organic disease), one characterized by the fact that the man was unable to rouse himself from what began as a natural night's sleep. At the time I expressed the suspicion that some grave disease might

be developing in the nervous system. This man died about eight months ago with signs of brain tumor.

As a matter of course, mental symptoms develop in the majority of cases, especially in the later stages, but I would not essay to describe these here, though such psychoses are characteristic, and it is nearly always possible to distinguish them. I do not think, however, that this can be done with any certainty except by a physician trained in psychiatry, as their chief characteristic is their dissimilarity to the essential mental diseases.

One of the other familiar signs of tumor is vertigo. As in the case of headaches, this vertigo is different from the dizziness and so-called vertigo associated with other conditions. It is not significant unless it comes on suddenly and overwhelms the patient to such an extent as to seriously disturb his balance, and, I might say, interfere with his consciousness to a certain extent. Neither should we confuse this vertigo with cerebellar imbalance, nor a condition described by Babinski, known as *asynergia*. *Asynergia*, cerebellar ataxia and various forced movements of the extremities are probably all kindred signs and due to disturbance of the organized co-operation of the muscle systems of the body. They are nearly all assignable to cerebellar lesions. Patients with cerebellar tumor sometimes assume certain positions of the head, and, if the chosen position is interfered with, vertigo and indefinable distress are caused. The explanation of this is, seemingly, that the assumed position is defensive and tends to correct misplacements of the cerebellum by the tumor mass. It should be borne in mind, however, that tumors may exist in the cerebellum without producing this characteristic phenomenon, especially if the vermiform process is not involved. Choked disc and optic neuritis is practically characteristic of brain tumor, as fully 90 per cent of cases, according to Oppenheim's statistics, are due to intracranial pressure. The great importance of always inspecting the eye fundus is, therefore, obvious. Not only an actually choked condition of the disc should be taken into consideration, but degrees of engorgement of the veins and the various grades of optic neuro-retinitis approaching extreme papillitis. This sign might be wanting in advanced tumor growth, and its absence, therefore, means nothing if other symptoms exist. Optic nerve conditions are most apt to develop when the disease is located in the posterior cranial fossa and when

the central ganglia are implicated. It is practically always bilateral, though tumors in the frontal lobe are apt to press directly upon the nerve and produce a unilateral choking. I remember seeing this in a most pronounced form in a case under the care of Dr. John B. Elliott, where the right frontal lobe was involved in a sarcomatous mass, as subsequently confirmed by Dr. Elliott at necropsy. The corresponding nerve head was choked, while the other was quite normal. Gunn first made this observation, but subsequent writers have ascertained that it does not obtain as an invariable rule. Unilateral fundus symptoms may exist in tumors elsewhere than in the frontal lobe. Slowing of the pulse is another phenomenon occasionally seen in heightened intracranial pressure, and is of value in the recognition of tumor in association with other symptoms. Lesion of the pneumogastric nucleus might do this independent of pressure effect.

As regards all general symptoms, it should be kept clearly in mind that more or less slow, steady progress for the worse signifies the presence of a tumor. No other condition is likely to do this. On the other hand, the sudden inception of symptoms, while characteristic of other conditions, might also occur if edema or hemorrhage into the tumor takes place.

The most frequent forms of brain tumor, in the order of their incidence, are glioma, solitary tubercle, sarcoma, gumma, carcinoma, fibroma, angioma, lipoma, psammoma, osteoma, papiloma, dermoid and degenerative cysts. But it should be borne in mind that practically any form of tumor might occur in the brain. The importance of considering the variety of the given tumor when its presence is recognized is its bearing on the choice of treatment and the prognosis. Glioma, gumma and sarcoma are peculiarly frequent in adult life, while tubercle—especially of the cerebellum—is almost peculiar to childhood. Tubercle is very rare in adult life. It should be remembered that neoplasms in the brain behave very much the same as when situated elsewhere, and the rate of growth, absence or presence of cachexia, etc., might thus give some clue as to their nature. Likewise should other portions of the body be examined carefully for the presence of malignant and other varieties of growths which are susceptible to metastatic transmission, and, if such a primary focus is discovered, little doubt need remain as to the nature of the concomitant cerebral growth. Further, when

neuro-fibromatous masses are found in the accessible nerve trunks, intracranial disturbances assignable to tumor encroachment should immediately arouse suspicion of similar processes in some one or several of the cranial nerves before their exit from the skull. Such involvement is particularly apt to occur in the auditory and trigeminal nerves. Nevus and angiomas, especially about the face, head and neck, have the same significance.

I recall having seen a child with Dr. DeBuys in which there was an extensive nevus of the face, with cerebral symptoms amounting to hemiparesis from birth. There seemed to be only one interpretation of the latter symptoms—namely, that a similar condition existed on the indicated hemisphere. It should be remembered that, although syphilitic meningo-encephalitis is a frequent disease, pure syphiloma of the true brain substance is comparatively rare, and that when it does exist it is often a surgical condition, as medical treatment is not nearly so effective as in syphilitic activity about the rind and covering membranes of the brain, probably because absorptive processes are slow or practically nil in the remotely deep parts of the brain where the blood and lymph circulation is scant and stagnant. Therefore, in the presence of optic neuritis, with danger to the sight, and where medical treatment does not induce quick results, palliative surgery especially should be resorted to, though the tumor is quite certainly syphilitic.

It rests more with the neurologists to decide upon the operability of cerebral tumors, and in reaching such a decision he is guided by two chief considerations, one of which is that we have just been discussing—the variety of the tumor. This is the lesser consideration, as we cannot stand unconditionally on the probable innocence or malignancy of a given tumor, or even certainty on this point. The character of a growth, however, does decide whether or not it is diffuse or circumscribed and susceptible of enucleation. When it is established that the intracranial involvement is a metastatic transmission from a known primary seat elsewhere in the body, surgery is usually inadmissible. Likewise, if it seems probable that multiple tumors exist, surgery is less likely to prove successful, although Oppenheim and several other authors have reported successes in such instances. A point of some importance in attempting to determine the variety of a tumor when its location has been established is the fact that certain varieties of tumors show a pre-

dilection for certain structures—e. g., glioma for the hemisphere; cerebellum and pons (where the glial tissue is predominant), tubercle for the pons, cerebral cortex, etc. Glioma is usually a single tumor; also sarcoma. Carcinoma is nearly always a metastatic condition. Syphilomata and tuberculomata are most frequently multiple.

Rather does the question of operability rest upon the accessibility of the tumor, and this leads us to the consideration of focal diagnosis, which, however, we are unable to discuss freely here, as we would be carried beyond the scope of this paper. Although surgical successes in operations upon neoplasms in various other areas of the brain are reported by exceptionally skilled brain surgeons, such as Cushing, Horsley and Krause, and although our knowledge of this work is still developing, with promise of a greater percentage of successes, surgery of the brain is still, to a large extent, resolved into surgery of the motor area. Tumors in this region produce symptoms quite easy of interpretation. This area is very accessible, and when a removable tumor is encountered here success is the rule, and surgery has, therefore, gained much credit from this field. An important general consideration in location is the point that tumors develop with greatest frequency in the cerebrum, especially the centrum ovale, probably because it merely affords a larger bulk; next, the cerebellum, then the pons and central ganglia in the order mentioned. Tumors in the cerebral hemisphere may occupy a silent area and not give rise to any perceptible focal symptom, but when such a process has assumed larger size it is almost certain to encroach directly upon one of the functional areas or exert distant effect thereon. Thus do tumors in the hemispheres practically always finally exert hemiparetic or hemiplegic influence, and in this way betray their location. As a matter of fact, the left hemisphere is the one of greatest functional importance, and growths on this side disclose their presence more quickly. It now seems to be fairly well established that lesions in the left frontal region give rise primarily to mental symptoms of a certain character, such as facetiousness and allied psychic disturbances. Involvement of Broca's area quite regularly produces motor aphasia, even though it is now recognized this is not the sole structure concerned in the production of speech, and although various aphasias are a more comprehensive involvement of the

intelligence than was formerly thought. Tumors in the parietal lobes are less susceptible of location except when certain sensory and occipital lobes are less susceptible of location except when certain sensory symptoms obtain, such as astereognosis and involvement of the optic center and radiations occur.

Lesions of the rolandic area always produce motor disturbances of the opposite side, and when such conditions obtain, with the aid of the electric current and a proper electrode, the exact confines of the tumor can be worked out after the brain has been laid bare in operation.

Only comparatively recently have we known the great physiological importance of the hypophysis, and this has led to special study of its diseases, which are practically always tumor formations. Certain very definite changes in the body metabolism take place when this gland is involved, determined by whether the anterior or posterior lobe is implicated. However, the most certain diagnostic aid we have in this class of tumor is skiagraphy, which, by disclosing the enlargement of the sella turcica, an inevitable consequence of expansion of its contents, settles the diagnosis.

I have the pleasure to thank Dr. C. W. Duval, who was kind enough to prepare the specimens presented to-night, and Dr. Henry Daspit, who performed the necropsy.

Louisiana State Medical Society Proceedings.

EDITED BY PUBLICATION COMMITTEE,

DR. JOSEPH D. MARTIN, Chairman, 141 Elk Place, New Orleans, La.

DR. E. DENEGRE MARTIN, New Orleans, read a paper entitled

Enemata and the Murphy Drip.

The subject of this paper was suggested to me by the New Orleans Polyclinic class of the last session. So numerous were the inquiries regarding the Murphy drip, I have thought a discussion of the apparatus and its application might prove of value to the members of this Association.

To better comprehend the *modus operandi*, we should look back a few years to the origin of rectal irrigation and refresh our memories in anatomy, physiology and hydraulics. The rectum

comprises that portion of the intestinal canal between the semilunar valves of Morgagni and the attachment of the mesentery opposite the third sacral vertebra. It derives its name from the fact that it was originally supposed to be straight. This is not true, however, as it forms a double anterior-posterior curve, as well as two lateral curves in its descent. The latter are not well marked, but the *anterior-posterior* are, and this should be borne in mind when introducing the finger or an instrument into the organ. These curves may also be exaggerated by tumors, retroverted uteri, or adhesions. The length of the rectum is ten to fifteen centimeters in men, and a trifle less in women. When empty it measures from ten to twenty millimeters from before backward, and twenty to forty millimeters from side to side. When distended its proportions vary greatly. Its capacity varies also with the age of the individual. For an infant, one-half to one ounce; for a child from two to five years, two to six ounces; from five to fifteen years, six ounces to one pint; for an adult, one to two pints.

While forming a portion of the alimentary canal, it takes no part in the processes of digestion; the sigmoid and the rectum are storehouses for the fecal material after the process of digestion is completed, and are provided with a system of tubules or glands which absorb the fluids or nourishing substances which are left. It is governed by both voluntary and involuntary muscles. The organ relaxes and opens through the inhibition of sphincteric contractions ordinarily governed by will-power. It is governed by two centers—one in the spinal cord and one in the brain. When injury to the cord is sustained, control is lost. Feces or air in the rectum excite the lumbar center and cause contraction in the wall and relaxation in the sphincter. The administration of enemata is based upon this knowledge. It must be borne in mind that the sigmoid and rectum act as absorptive and secretive organs. The longer the fecal mass remains in them, the drier will it become. This absorptive action of the rectum has long been made use of by physicians for stimulating and nourishing patients, and upon its absorptive capacity Murphy based the idea of the drip.

The use of the enema, as you probably know, was the result of observations upon animals. It is related that many years ago, in India, certain long-billed birds of the Ibis family would return from journeys in the interior in a wretched condition, which was

due either to the absence of water or feeding upon a berry which was very constipating. This bird would reach the river stream in an almost exhausted condition. It would fill its bill and mouth with water from the river, and then, inserting the bill into the rectum, would inject the water into the bowel, which would give it almost instant relief. The performance would be repeated several times, until the rectum was completely emptied, and, after drinking freely of the water, in a short time would fly away with its vitality entirely restored. The chiefs and priests of the tribes, noticing this occurrence and the wonderful effect upon the birds, suggested that it might be tried upon some of the old men, who from age and inactivity had become constipated. From some reeds they managed to construct a primitive syringe, and with this would inject warm river water into the bowels of these old men. The old men took on a new lease of life; they even took unto themselves young wives, and again took up the active work of the tribe, much to the amazement of the young men, who had considered them out of the race. From accounts, the treatment must have been heroic, for they speak of the use of gallons of water. Hence, the origin of the enema, which, though in use for centuries, is often improperly administered.

With a knowledge of the formation, physiology and the capacity of the rectum only, can an enema be intelligently given? If for the purpose of producing an evacuation, an amount sufficient to distend the rectum, of some soapy or oily substance, should be administered, and administered gently, but rather rapidly. If to be retained, slowly, and with as little pressure as possible; if for absorptive purposes, not faster than 50 to 100 minims per minute, and with an elevation of the reservoir not more than $4\frac{1}{2}$ inches above the rectum, as any point above this will produce great discomfort to the patient and the rejection of the fluid. Enemata, though apparently harmless, are sometimes fraught with danger. I have seen ruptured appendix caused by the use of a cascade syringe.

I wish also to call attention to a mistaken idea that is very prevalent, and that is that the use of a colon tube means the introduction of a fluid into the colon. Whenever a nurse reports to me that she has given a high enema simply because it has been given through a long tube, I know she has been badly taught. I have

always found it difficult to introduce a colon tube through the sigmoid into the colon, and frequently it cannot be done without the aid of an anesthetic. If it is desired to fill the colon, it is best to elevate the hips and allow the fluid to flow in slowly

I now wish to devote the rest of this paper to the Murphy drip, which Dr. John B. Murphy, who first suggested it, tells me is as little understood and as much abused as the Ochsner treatment for appendicitis.

Upon a thorough knowledge of the physiology of the rectum, Murphy based his new method of treating cases of suppurative peritonitis, and to his genius the profession owes another debt of gratitude. Proctoclysis administered in this way is now applied to every condition, whether acute or chronic. Even in cases where it is not a curative agent it is without doubt most beneficial. I am to-day administering nutriment, stimulants and purgatives by this method, and find it most satisfactory. To better emphasize the mode of administration by Murphy, I shall quote freely from a letter recently received from him on this subject, and for which I wish again to express my thanks, as I consider the proper use of the drip of vital importance, both to patient and doctor.

The treatment, he states, is based on the following principles:

1. That the natural condition of the large intestine is one of distension.

2. That the large intestine is a "dryer" of the alimentary material.

3. That all of the feces come into the large intestine in a fluid or semi-fluid state, and are dried—that is, the fluid is extracted from them in the large intestine.

4. That the material in the large intestine is always held under low pressure or tension, when gas is formed or comes into the large intestine, producing a higher tension, it is immediately expelled.

5. On this basis it has been learned that bland, isotonic fluids are rapidly absorbed by the large intestine.

6. If the tension is increased beyond a four- or seven-inch hydraulic pressure, *it causes a spasm of the bowel and discomfort, which is relieved only by expulsion of the material.*

7. It does not matter how fast the fluid is permitted to flow in. If the plus pressure is only four inches hydraulic, it will not be expelled by the intestine. Furthermore, it will not flow in rapidly

with that pressure, as that is just about the inter-abdominal tension.

8. Normal salt solution, or normal salt solution with a teaspoonful of powdered corn starch added, can be admitted, and will be absorbed in quantities ranging from sixteen to thirty pints in twenty-four hours, if the plus pressure does not exceed four inches under normal physiological conditions or an inch or two more in inflammatory conditions, which cause the abdominal tension to be increased.

9. It can, therefore, be readily seen that salt solution admitted by the drop or any other method, into the bowel, when it accumulates there, attains a pressure equal to the hydraulic pressure of the syringe bag or can. And if that can is elevated more than six or seven inches above the level of the buttock, or rectum, the pressure will become too great in the bowel—quickly, if there is no clamp or restriction on the tube; slowly, if the tube is restricted to a drop condition—but eventually in both so as to cause the expulsion of the fluid.

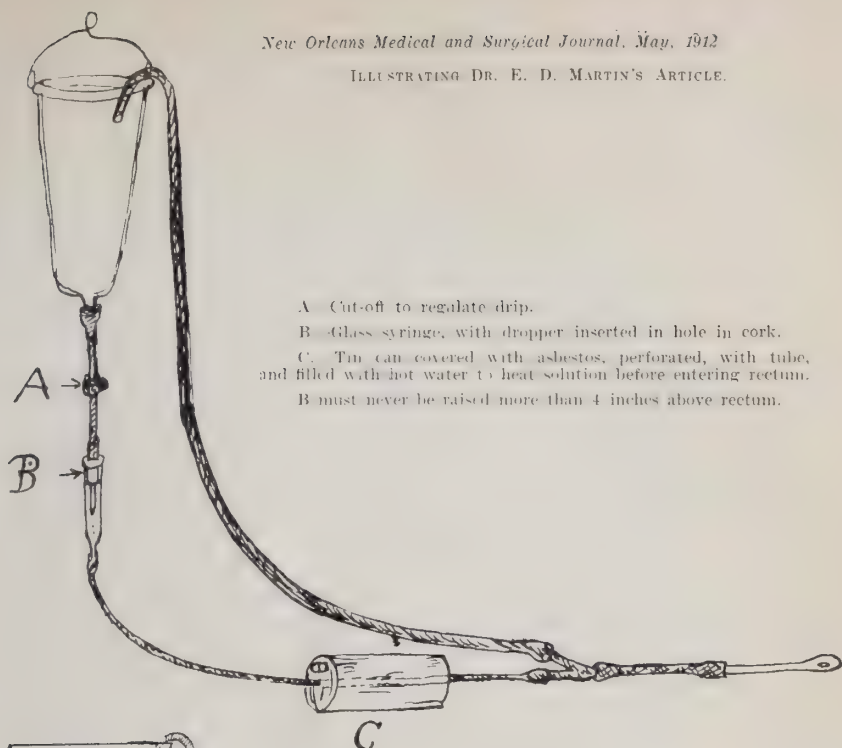
10. If gas is formed in the large intestine when water is admitted, the bowel will endeavor to expel it; and, unless the tube is large and the means of rapid escape of the gas provided for, the gas with the fluid will be expelled into the bed.

11. A large tube, one of three-eighths to one-half inch in diameter, is therefore essential to the proper administration of rectal salines. With no restriction or clamp on the outlet arm of the tube, the rapid expulsion can take place back into the can if the latter be low.

12. If one has not a competent nurse, any type of can or bag syringe can be fitted so as to have the material admitted drop by drop, and still a provision given for the free return of the material into the can, with or without gas, should the tension on the intestine become too great, or should the patient strain. (See crude figure of the essentials necessary for this plan. All complicated types of apparatus for the administration of salines are unnecessary.)

13. Salines should be administered with brains, and not with cans or tubes.

14. Four ounces or eight ounces given in twenty-four hours would be very much like putting on a postage stamp where a Mason-apron-sized poultice is needed. It is inefficient, unscientific and a delusion to the doctor and the patient.

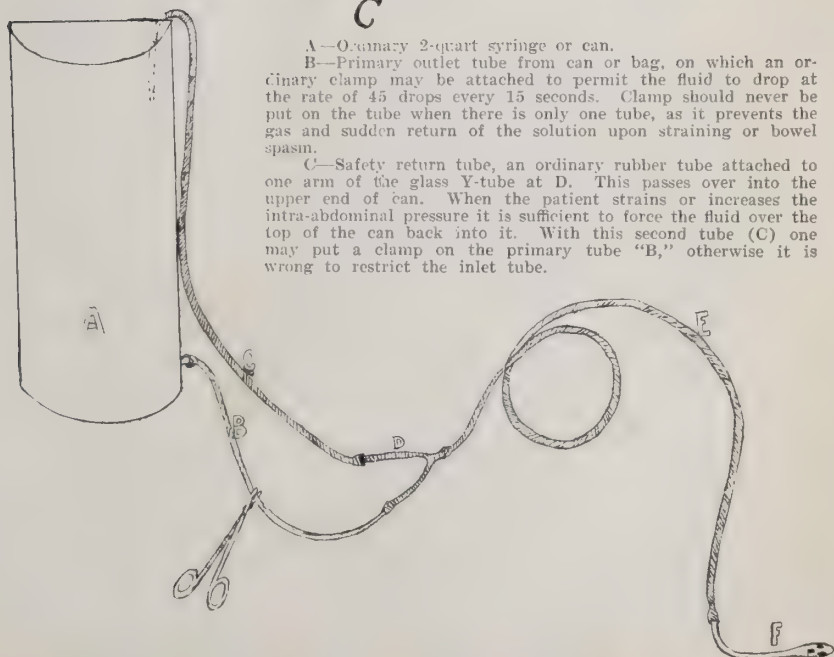


A—Cut-off to regulate drip.

B—Glass syringe, with dropper inserted in hole in cork.

C—Tin can covered with asbestos, perforated, with tube, and filled with hot water to heat solution before entering rectum.

B must never be raised more than 4 inches above rectum.



A—Ordinary 2-quart syringe or can.

B—Primary outlet tube from can or bag, on which an ordinary clamp may be attached to permit the fluid to drop at the rate of 45 drops every 15 seconds. Clamp should never be put on the tube when there is only one tube, as it prevents the gas and sudden return of the solution upon straining or bowel spasm.

C—Safety return tube, an ordinary rubber tube attached to one arm of the glass Y-tube at D. This passes over into the upper end of can. When the patient strains or increases the intra-abdominal pressure it is sufficient to force the fluid over the top of the can back into it. With this second tube (C) one may put a clamp on the primary tube "B," otherwise it is wrong to restrict the inlet tube.

D is a glass Y-tube, admitting of connection of the thin tubes.

E is a rubber tube $\frac{3}{4}$ or $\frac{1}{2}$ inch in diameter, which leads to and connects with the metal tip, "F."

F is a glass or hard rubber douche tip, with three to five openings at least $\frac{1}{8}$ inch in diameter; should be curved. A No. 36 soft rubber catheter, with two openings, may be used instead. The rubber tube should be strapped to the thigh with adhesive plaster about three inches from the tip; prevents it from slipping out.

It should not be taken out and reinserted with each irrigation, as this process is painful and annoying, and finally irritates the anus. It may remain in 24 or 48 hours, and should be removed only at bowel movement, and even this is not necessary.

15. The portion of the tube in the rectum may be of soft rubber or hard rubber or glass. If the last two, they should be so flexed that the outer end would not compress against the mattress and cause a counter-pressure by the inner end on the rectum. No matter which tube is used, it should have good-sized openings; if, multiple, they should be one-eighth of an inch in diameter; if single, a third of an inch, so that the particles of feces and fluid might return into the can when the pressure exceeds the desirable tension.

16. Various devices have been resorted to to keep the fluid warm. If it is heated to 105° F. in the can when the process is commenced, and the latter is thoroughly wrapped in a Turkish towel, or its equivalent, it will retain the heat, providing the tube is covered under the bed clothing.

17. Our present plan is the same as the original. We give a pint and a half of normal salt solution every two hours, and so arrange the elevation of the can that it takes about an hour or an hour and a quarter for that quantity to flow in, if the drop method is arranged. That means about forty-five drops in fifteen seconds.

18. We now have sixty-nine cases of general suppurative peritonitis from direct perforations of the alimentary tract into the free peritoneum, with two deaths. This includes all of the cases of general suppurative peritonitis that have come under our care for treatment, except the post-partum subperitoneal cellular infections, which do not belong to the class of perforative peritonitis at all, as this is a subperitoneal infection of the cellular tissue with a secondary accumulation of fluid on the peritoneal surface in the peritoneal cavity. This never will be successfully treated by laparotomy or by proctoclysis. The patient will be aided and relieved to a considerable extent by a proper proctoclysis through the blood washing.

"In my original communications I had suggested it might be elevated as high as seven to twelve or fourteen inches. It is altogether too high and entirely unnecessary. I wish," says Dr. Murphy, in his letter, "you would emphasize that in your article, because, if you do, you will receive the praise of all those who have occasion to use it on your advice."

Though I most heartily agree with Dr. Murphy in regard to the simplicity of the apparatus in use, I believe it is advisable to use

the drop method, and have this so arranged that even the patient can watch it. A very simple device suggested by Dr. Parham is now in general use in the Presbyterian Hospital, as well as in my wards in the Charity Hospital. As a heating device, though not essential, I have added the hot-water can described in the cut.

I believe that those of you who hear this paper, or read it, will have a pretty clear idea of the Murphy drip, and I trust will apply it, as Dr. Murphy says, with brains, and not apparatus.

DISCUSSION OF PAPER BY DR. E. D. MARTIN.

DR. F. W. PARHAM, New Orleans: I want to say a word or two about the mechanical part of the Murphy drip, as the indications are so generally understood. The essential thing to bear in mind in connection with the Murphy drip is to remember what is absorbed does the good, and not what goes into the rectum. We have got to provide that the fluid shall go into the rectum in such a way that it is practically absorbed as it goes in. By bearing that point in mind it does not make much difference how you get it in, provided you are getting it in drop by drop, and it is well to have the apparatus so arranged that the dropping can be watched by the nurse and regulated by the watch. I have not paid so much regard to the gravity apparatus, but rather depended on shutting it off with the clamp above, and being sure that the fluid goes in at a regular rate, drop by drop, into a glass syringe connected to the tube. The nurse can regulate the clamp, and can tell exactly how many drops per minute are going into the rectum. If it is going in at a certain rate, not beyond the absorptive power of the rectum, there will be no difficulty in retaining it. When the nurse says the patient is continually passing water out of the rectum alongside the drip, it is due to the fact that the water is going in too fast, and sufficient provision has not been made for the escape of gas. The Y-tube allows the gas to take the direction of least resistance out of the rectum, and if the outflow can take the direction of least resistance through one arm of the Y, while the saline fluid is passing through the other into the bowel, there will be no retention of gas nor fluid expelled.

DR. A. C. KING, New Orleans: There is one point I desire to call attention to, namely— we are getting Murphy's original apparatus right here. Dr. Martin informs us that it can be made

for about fifty cents. That is cheap enough. We see on the market apparatus that cost anywhere from ten dollars up to twenty dollars. That is all right if a man is rich and does not care how much money he spends on such an apparatus. Here is what Murphy says about some of the apparatus, and I want you to remember it. He shows how the apparatus can be distorted in all sorts of ways. He says that he has visited a great many hospitals and has seen the Murphy drip given a number of times, but that if he had not been told it was the Murphy drip he would not have recognized it under any conditions.

DR. MARTIN (closing): In my paper I simply called attention to the therapeutic uses of the Murphy drip, and all I would ask is that you look it up, and if you do, and try it, you will have good results with it.

DR. E. S. HATCH, New Orleans, read a paper entitled

Treatment of Old Intra-Capsular Fracture of the Hip Joint Illustrated.

Intra-capsular fractures without impaction are rare, and it is also rare to get good union in such fractures by the use of apparatus alone. This is due, among other things, to insufficient blood supply, and, too, it is very hard to get the fragments into their proper relations, one with the other, and hold them there.

For this reason Von Lagenbeck, as early as 1858, operated on a case of intra-capsular fracture of the femur and fixed the fragments. The patient died of hospital gangrene. Ten years later, in 1868, Loreta reported the first successful case.

Dr. Willy Meyer operated the first case in this country in 1893. Since that time there have been several cases reported, in which the result aimed for was the same in all cases, the methods used differing quite markedly.

In considering those cases in which it is desirable to fix the fragments of an old intra-capsular fracture by open operation, several points at once suggest themselves. They are, mainly, age, resisting power, and amount of disability.

Advanced age is a contra-indication, as are chronic lung and kidney diseases. Still further, a case which presented a moderate limp and slight pain would not warrant an operation.

That leaves those cases that occur in young and middle life, in which the general health is good and in which the patient is completely or very much disabled.

Some authors believe that all such cases should be operated on **at once**, but the writer feels that, unless there is some special reason, that the ordinary methods of treating such fractures should be given a fair trial.

While, with modern methods, the question of sepsis is a very small one, still, as in all fracture cases, when a good result can be secured without open operation, such treatment is desirable.

The technic employed by the different men who have reported cases has varied very much, and I shall simply say a few words about the various operations advised.

Gillette used an osteoplastic flap, first making a large semi-circular cut with the convex side down, over the femur, and then going through the bone below the great trochanter and turning back this flap, which gives him a good view of the fracture. The edges of the fracture are then freshened up and ivory pegs driven through the neck into the head of the femur. The flap is then turned back, which holds the pegs in place.

Freeman and Trendelenburg also use a long, deep incision, and go down to the fracture, because they believe that the ends of the fractured bones should be freshened.

From the writer's experience, such large incisions and scraping of the fragments are unnecessary, and the X-ray, made before any operation is attempted, will help to clear up this question. At least, the accompanying radiographs of the cases presented will show that in these cases the small incision was all-sufficient.

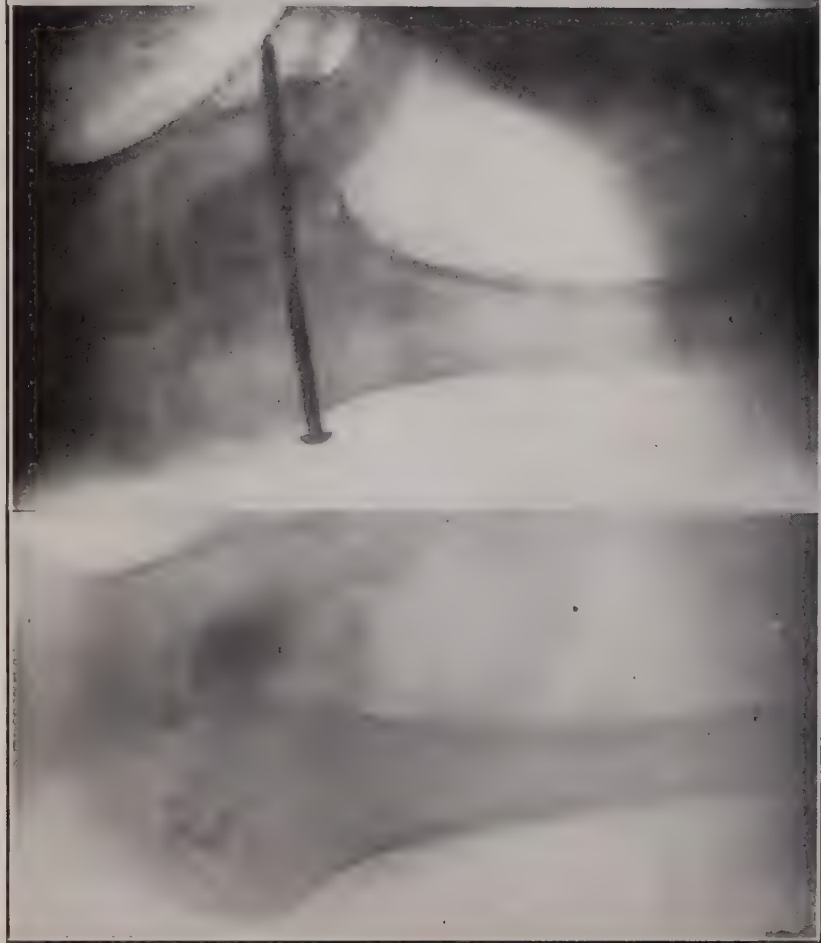
The method used in the following cases was the one suggested by Nicolaysen, who, in 1900, reported twenty-one cases, except in the first case in which the writer assisted Dr. R. Matas, and to whom he is indebted for the privilege of adding that case to this report.

This technic is very clearly given by Nicolaysen and translated by Dr. Farrar Cobb in his paper, which presents the subject thoroughly. To quote from Dr. Cobb's translation:

"After a thorough cleaning of the trochanteric region of the injured side, the patient is placed on the uninjured hip and an assistant makes traction on the leg until the great trochanter is drawn into place.

"The operator directs this procedure until Burrow's angle has been enlarged to a right angle, then a steel wire nail 15 c. m. in length, starting $4\frac{1}{2}$ -5 c. m. below the top of the trochanter, is hammered through the neck and head of the femur into the acetabulum."





CASE 1. Miss E. S., February, 1908.

Shows condition at time of first examination. Note marked displacement of fragments, with no attempt at union.

CASE 1. February 20, 1908.

Fragments have been pulled into best possible position and silver nail driven through. Note condition of coxa-vera, and that nail goes through acetabulum. Picture made through plaster cast.

CASE 2. Mr. I. L., April 3, 1909.

Fragments in good relation; nail in position at proper angle. Nail has never been removed. Picture made through plaster cast.

Plaster is applied from the toes to the iliac crest. After three or four weeks the nail is removed, and it is always found loose. The plaster is removed in eight or ten weeks, but the patient is up on crutches for some time previously.

Borrow's angle is an angle formed at the top of the trochanter by a line from the anterior-superior spine of the ilium to a line from the middle of the crest of the ilium. With the trochanter in normal position, this angle is a right angle.

CASE I.—Miss E. Smith, operated on by Dr. Matas, March 7, 1908. In this case Dr. Matas made a large incision down to the bone, and, while the writer made traction on the leg, the doctor assisted in getting the fragments into position through the incision. A coin silver nail was then driven in just below the trochanter, and went through into the acetabulum. As will be seen by the X-ray, there was a marked displacement of the fragments in this case.

On June 27, 1908, the nail was removed by Dr. Matas through a very small incision, as it would have been impossible to have a functional result with the nail left in the position shown by the X-ray.

The records in this case were not carefully kept at the time, so it is impossible to give a full report, but as far as I know the result was a good one.

CASE II.—Mr. I. L. carpenter, aged 37, referred by Dr. Thomas on February 5, 1909, with the following history: On October 22, 1908, while demolishing a building, patient was struck on the back by a falling wall. Injury to left hip, called at the time a "slight bruise"; suffered great pain from that time until February, 1909, and was totally disabled. Patient came into the office on crutches. Left leg one inch shorter than the right, and was held in position of outward rotation; voluntary rotation and adduction impossible.

The X-ray made at the time showed an old, ununited fracture of the neck of the left femur.

February 8, 1909, under ether, a small incision two inches in length was made below the trochanter down to the bone. With the X-ray before me, an assistant made traction on the leg until the trochanter was in normal position, then a common wire nail, $4\frac{1}{2}$ inches long, was driven into the femur through the head. Wound closed and a plaster spica applied from the waist to the toes. Patient was in bed one week, and then up on crutches.

April 5, 1909, plaster removed and a new one applied. Patient allowed to walk in the plaster. Second plaster removed June 29, 1909. Patient could walk well, and had no pains; one inch shortening. I have not seen the patient since, but he writes, under date of April 30, 1911:

"I am at present employed as a delivery man. Can jump on and off my wagon as though I never had a fractured limb, and walk as fast as an ordinary man. I suffer no pain or discomfort."

CASE III.—Mr. J. M., salesman, aged 40, referred by Dr. Chas. McVea. History as follows: On September 26, 1910, thrown from a buggy and struck left hip on a telegraph pole. Was unconscious. Injury called dislocation. He had not been able to walk since the accident. Examination February 25 shows a well-nourished man with one inch shortening of the left leg and atrophy of thigh and calf. He unable to move the left leg practically any, and it is held in position of outward rotation. X-ray made at the time shows old intra-capsular fracture. On examination, March 4, under ether, after the trochanter had been brought into normal position, a steel nail $4\frac{1}{2}$ inches long was driven into the femur through a two-inch incision $2\frac{1}{2}$ inches below the trochanter in an oblique upward direction into the head of the bone.

The limb was put up in a plaster spica from the waist to the toes. Patient suffered no discomfort, and was up on crutches in two weeks. The radiograph, made through the plaster, shows the nail in the proper position. Patient had the part of cast below the knee removed on May 1, 1911, and reported to me May 4, 1911.

On May 25, 1911, the cast was removed and the wound found healed. He could adduct the leg well. Another cast was applied, and the patient advised to walk on crutches for two weeks, and then begin to put more and more weight on the leg.

In regard to the smaller points of the technic, the writer used the rules of Nicolaysen, with the one change, that of the position for the patient during the operation. Nicolaysen advises putting the patient on the well hip, but it seems that, while it is possibly easier to drive a nail directly downwards, that, with the patient on his back and the trochanter drawn down into position, that it is very simple to drive a nail with ease and perfect direction in the horizontal position.

Then it is easy to draw the patient on to the pelvic rest for the



(Case 3. Mr. J. M., February 25, 1911.
Condition at time of first examination. Fragments
in fairly good position. No bony union.

(Case 3. Mr. J. M., March 7, 1911.
Picture made through plaster cast, showing nail in
position. Made by Dr. J. Birney Guthrie.

(Case 3. Mr. J. M., May 23, 1911.
Picture after removal of first cast, showing nail in
position at proper angle with bony union.

application of a spica, with no motion to the operated part. A small incision of about one and a half to two inches below the trochanter down to the bone gives ample room and heals very readily, and it does not seem necessary to make a large incision and freshen up the fragments unless the X-ray shows the need in a special case.

The distance below the trochanter for the entrance of the nail should be studied in each case from the X-ray.

In the writer's two cases, a common steel wire nail, $4\frac{1}{2}$ inches long and $\frac{3}{16}$ inches in diameter, was used. An ideal material seems to be coin silver, as advised by Dr. Wilson, and in the case of Dr. Matas such a silver nail was used.

In each case small barbs were made on the nails in a direction to help prevent the slipping out of the nail.

In Case I the nail, as will be seen by the X-ray, went through the acetabulum, and was later removed. In the other two cases the nails are in good position, and, as they have caused no symptoms, they have not been removed.

In conclusion, the operation seems to be a desirable one to use in those cases which come to the orthopedist several months after injury, in which the patient is prevented from getting about by the fact of non-union of the fractured femur. It has practically no danger and gives excellent results.

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DISCUSSION OF PAPER BY DR. HATCH.

DR. MARION SOUCHON, New Orleans: I did not expect to be called upon to discuss this paper. I feel that Dr. Hatch has gone so thoroughly into the subject, his paper is so well written, and the evidence he submits so sound and indisputable as to allow of no

discussion. It is to be taken as a high compliment to Dr. Hatch that the discussion of his paper be left to himself.

DR. HATCH (closing) : It is an easy way to relieve those patients who are very much incapacitated.

DR. JOSEPH D. MARTIN, New Orleans, read a paper entitled

Treatment of Tetanus.

From May 1, 1905 to January, 1911, there were treated in the Charity Hospital 46 cases of tetanus in adults. Of these, 28 were males and 18 females. In 28 cases the injury was in the foot; 14 were due to nails and 10 to splinters. Of the 46 cases, 9 recovered. The average incubation period for those who recovered was sixteen days; for those who died, seven and a fraction days. Twelve of these 37 died in the first twenty-four hours.

According to the records, only 19 of the cases received serum; the dose was anywhere from 10 to 50 c. c. Bromid and chloral were used in every case, the dose ranging from 20 to 40 grains of bromid and 5 to 10 grains of chloral every two, three or four hours as indicated.

Twenty-two of the cases had convulsions. Trismus and pain in the back of the neck were always the first symptoms complained of.

With your permission, I shall briefly run over the treatment in a few of the most interesting cases. Remember that every case received bromid and chloral.

Cases 2 and 3, besides bromid and chloral, were given 5 c. c of serum, 2 minims of adrenalin, and 20 minims of normal salt solution by spinal injection. Both died.

Case 13, in addition to bromid and chloral, was given, by hypodermocleisis, 50 c. c.'s of serum in a pint of hot water, to which was also added half an ounce of magnesium sulphate. Died.

Case 14, besides bromid and chloral, was given 120 minims of 25% magnesium sulphate by spinal injection, to which was added $\frac{1}{4}$ grain of morphin and $\frac{1}{100}$ of scopamalin. The morphin and scopamalin were repeated again several hours before death.

Case 22 was interesting because he was free of temperature before death and had a hyperpyrexia of 110 after death.

The bromid and chloral seem to have had full sway until April, 1910, when we find chloretone used for the first time.

Case No. 35, white male, aged 32, was admitted to the hospital on April 25, 1910. Ten days before, he ran a nail into his foot. He was put to bed and given 20 grains of bromid and 10 of chloral every four hours. Later the same day he was given 20 grains of chloretone by mouth. On the next day, and until he died, on April 30, he was given 40 grains every four hours. If this chart is correct, he certainly received enough of this durg to paralyze him, and yet he died in convulsions. This case received no serum.

Case 38 is of interest because of the long period of onset. This boy claimed that forty-five days previously he had run a nail into his foot. He received no serum, but was given 30 grains of bromid and 10 of chloral every three hours for three days. On the fourth day, and until the ninth, he was given 10 grains of chloretone dissolved in whisky, as indicated. There were no convulsions, but opisthotonos. The respirations seldom went above 30. He recovered, as do most cases that have such a long incubation.

Case 43 was admitted on November 11, 1910, and died on the 20th. On admission he was given 1,500 units of serum, 40 grains of bromid, and 20 of chloral were ordered to be given every four hours. On the second day, and for the next five days, 10 grains of chloretone were given every four hours, as well as the bromid and chloral. On the eighth day 30 grains of chloretone were given by rectum dissolved in hot olive oil, both morning and evening. The same was done on the ninth and tenth days, but he died.

Case 45. This boy was admitted on November 20, 1910, having run a nail in his foot eleven days before. He was put to bed, after having been given 1,500 units of serum. Forty grains of chloretone were given by enema every twenty-four hours for five days, and then the dose gradually decreased. His temperature never went above 100 nor his respiration above 30. There were no convulsions nor opisthotonos, but rigidity of the back and legs.

From this you will get a fair idea of what has been tried in the hospital.

A part of the treatment that I failed to mention, because it is known to every one, is the thorough cleansing of the wound and the application of pure carbolic acid or iodine.

Chloretone, a preparation put up Parke, Davis & Co., seems to

be the best treatment by far, if we are to believe Dr. Willard Hutchins, of Detroit, who seems to have been about the first to use the drug in tetanus.

In the *Journal of the A. M. A.*, of June, 1910, he reports six cases, with five cures—one mild, one moderate, three severe, and one fulminating. Of these, he says:

"Death usually results from one of two causes: either the amount of toxin is so large that it directly affects a weak heart, or the vital centers in the medulla, the patient dying in a few hours, or exhaustion follows prolonged and severe muscular contraction."

Practically all in the first class will die; in the second class of cases treatment is more hopeful. The object is to control the muscular contraction. After a comparative study of the various methods of treatment which have won a recognized place in tetanus therapy, he became convinced that chloretone was the best agent so far employed for the purpose of controlling a muscular contraction. He states that they were completely controlled in every case. My experience with the drug began on July 2, 1910, and I followed the Hutchins line of treatment. The case being a severe one, and of great interest to the half-dozen or more who saw it, I shall report it in full.

On June 25, while playing with some boys in the street, C. P., a white boy, twelve years old, was struck in the back of the head with a sharp stick. He immediately went into the house and washed the bleeding wound with peroxid. On the fifth day his head hurt, and his father sent him to my office, where the wound was freely opened and swabbed out with pure carbolic acid. On the morning of the seventh day, July 2, he came to my office with a stiff neck and slight trismus. He was sent to the New Orleans Sanitarium and immediately put to bed. Before the chloretone could be gotten his body was rigid, two hours after admission. His temperature was 99.5, pulse 84, and respiration 18. Three hours after admission he was given 30 grains of chloretone dissolved in one ounce of olive oil, by enema, and at the same time he was given 1,500 units of serum in the groin. Very soon after the chloretone was given him he fell asleep. By four o'clock the respirations had gone to 26, pulse to 92. At 11 p. m. the chloretone was repeated. He slept nearly all night.

Second Day. At 9 a. m. some muscular twitching was noticed.

Immediately the chloretone and serum were repeated. Sleep followed. At 7 p. m. some more chloretone. Patient slept all night. Respirations on second day, 22; pulse, 100 to 120; temperature, 99.3 to 101.5.

Third Day. At 5 a. m., opisthotonos was well marked and there was difficulty in swallowing. Thirty grains of chloretone were given, but as the neck and back did not relax, 15 grains dissolved in whisky were given by mouth. Following this second dose he fell into such a profound sleep it was difficult to arouse him and keep him awake long enough to take nourishment.

The wound in his head was dressed and he was given 1,500 units of serum. Respirations on third day were 34 to 40; pulse, 120 to 130.

Fourth Day. At 9 a. m. 1,500 units of serum were given. As patient had been in a stupor for the past twenty-four hours, only 15 grains of chloretone were given. At 5 p. m., muscular twitchings were noticed, and patient complained of tightness of chest and shortness of breath. Twenty grains of chloretone were given by rectum, and patient fell asleep. At 7:30 he awoke, very nervous, and soon the muscular twitching recommenced. Twenty grains were again given by rectum and he slept until 3 a. m. Respirations, 28 to 36; pulse, 104 to 120.

Fifth Day. Three a. m., very nervous and twitching. Fifteen grains were given by rectum, and the muscles relaxed, but he remained nervous, and worried about his condition. Fifteen hundred units of serum were administered, and at 5 p. m. 30 grains of chloretone. At night he was very restless, moaning and crying out in his sleep. Respirations, 28 to 36.

Sixth Day. During the early hours of the morning he seemed to be in great pain and was given $1\frac{1}{8}$ th of morphin, which gave relief. He had a good day and enjoyed his nourishment. At 5 p. m. the twitching began again, and he complained of pain in his head. Twenty grains of chloretone were given by rectum, and at 8 p. m. 15 grains by mouth.

At this time the pain complained of was accounted for by the development of a marked urticaria from the use of the serum. His face became very much swollen and painful. The itching, which was intense, was relieved by a mild carbolic bath.

Seventh Day. At 1 a. m. 20 grains of chloretone were given and the patient slept at intervals. A half-ounce of Epsom salts was

given to hasten the elimination of the poison from the serum. He talked at random nearly all night, but towards morning became rational. Except for a slight itching and the soreness from the injection of the serum, he had a good day.

Eighth Day. At 10 a. m. 30 grains were given by rectum, but patient was restless all day. The muscles of his back were rigid and muscular twitchings were frequent.

Ninth Day. He had such a good day that no medication was given.

Tenth Day. Slept well until 4 a. m., when awoke and complained greatly of pain in the back of his neck. An $\frac{1}{8}$ th of morphin gave immediate relief and he fell asleep.

Eleventh Day. Epsom salts, with good results.

Twelfth Day. His neck became very stiff again, but 15 grains of chloretone soon caused relaxation. At 4 p. m. rigidity returned and was again relaxed by 15 grains of the drug.

Thirteenth Day. At 1 a. m. slightly rigid, but restless, and complained of pain over his entire body. Morphin, grain $\frac{1}{8}$ th, quieted him and he slept for four hours. 9 a. m.—Chloretone, grains 20, by rectum. At 8 p. m. he became restless and the rigidity increased until his head was once more thrown back. Thirty grains of chloretone and 1,500 units of serum caused some relaxation. At midnight he had a convulsion and was given an $\frac{1}{8}$ of morphin.

Fourteenth Day. Bowels have not moved for thirty-six hours, in spite of salts and enemas. His condition is much worse. Respirations are 40, pulse 120. His neck and face are very much swollen, body rigid, nauseated, and having slight rigors. Only fair result from Epsom salts. At 7 a. m. morphin had to be given to relieve pain. An alum enema was given, with poor result. A half-ounce of Epsom salts was given, and repeated in an hour, with fair result only. At 8, 8:30 and 10 he was given drachm doses of salts, and at 10:30 an enema of infusion of salts and senna, without result. Patient was restless, nauseated, and in pain all day. Respirations were between 24 and 34.

Following a purgative enema in the early morning, a great quantity of flatus and some feces were passed. Pulse and respiration immediately dropped, muscles began to relax, and we all had a good sleep. At 9 a. m. he was given an ounce of castor oil, and his bowels moved freely. Gentlemen, the fight was won, and he left

the hospital on the twenty-first day, with a stiff neck, which he carried for nearly two months. He received, in the fifteen days, nearly an ounce of chloretone and 7,500 units of serum. I might mention here that he was an only son, and that his only sister had died two years before of the same trouble.

To summarize: The wound should be as thoroughly asepticised as possible, freely opened, and any foreign body removed, then swabbed out with pure carbolic acid, followed by alcohol.

Fifteen hundred units of anti-tetanic serum should be given each day for at least five or six days, and chloretone in 30-grain doses should be given by rectum. I prefer this route, because, by mouth, it is liable to upset the stomach as the occasion arises, and, I believe, the respirations are a good guide. When the respirations go above 30 it means the diaphragm muscle is having a hard time, and if not relieved it is only a question of how long it will be able to last. Morphin should be given only when there is pain. Liquid nourishment is to be given.

A most important part of the treatment is to keep the bowels open; it was this pain that almost caused me to lose my patient when I thought he was out of the woods.

Gentlemen, I thank you for the kind attention you have given this paper. I think the subject is one that is of interest to every one of us.

DISCUSSION OF PAPER BY DR. JOSEPH D. MARTIN.

DR. J. M. BODENHEIMER, Shreveport: I would like to ask Dr. Martin whether magnesium sulphate introduced into the spinal canal is abortive of tetanus?

DR. G. M. G. STAFFORD, Alexandria: I have had the opportunity of using chloretone in a case of tetanus with happy results. The case was well advanced when I saw it; the jaws were completely locked and opisthotonos was pronounced, the body rigid, and the case had existed for several days when I was called to see it. The tetanus was due to splinter in the foot, and the symptoms came on five or six days after the injury. I used six doses of serum, 1,500 c. c., but immediately put the patient on chloretone, 15 grains every four hours, and persisted in it. The child was about twelve years of age. I gave the drug by mouth. A projection of the front teeth facilitated matters in feeding the patient. About the third or

fourth day the symptoms began to abate, the paroxysms were further apart and milder, but the drug had a pronounced effect, causing me to think that I had probably used it too persistently. The child got dull, and almost semi-comatose, pulse rapid and thready, but the patient finally recovered, and was discharged at the end of three or four weeks. At present she shows no ill effects of the disease.

DR. F. W. PARHAM, New Orleans: I have had some experience in the use of chloretone in the treatment of tetanus. I have seen three cases, including one I saw with Dr. Joseph D. Martin. This case of Dr. Martin's was a particularly bad one, with a short period of incubation, and in the other two cases there was a short period of incubation. These three cases were in comparatively young people. The fourth case was in a man. All three of the first cases were treated with chloretone and antitoxin, and all recovered. The old man was treated with chloretone, and died in a thoroughly relaxed state. Under chloretone, after improving for a time, he relapsed and died in spite of all that could be done for him; so that I have come to think that, in those cases, a combination of chloretone with antitoxin is better than the chloretone alone, and I should advocate the use of chloretone. In this case the effect of chloretone corresponded with that described by Dr. Hutchins, of Detroit, who read a paper on that subject before the American Surgical Association two years ago, in which he advocated the use of chloretone very strongly, and it certainly seems to have advantages over chloral, so far as we can compare such effects. There is something about it which makes it superior to chloral. That is the conclusion I derived from the experience I have had in these cases.

DR. J. D. MARTIN (closing): In answer to Dr. Bodenheimer's question, I have no experience with magnesium sulphate, but others have used it, and the result has always been the same—death. Dr. Danna gave it a trial in the Charity Hospital, New Orleans. I agree with Dr. Parham that we should not use chloretone except in conjunction with serum. Serum should be given every day for five or six days, anyway. Chloretone has the advantage over bromides of being less deleterious. Chloretone can be given in enormous doses without any toxic effect.

Proceedings Bi-Parish Medical Society.

DR. E. W. BREAZEALE, Secretary, Campti, La.

NATCHITOCHES MEETING, DECEMBER 6, 1911.

DR. C. E. EDGERTON, of Coushatta, read a paper entitled

Is Acute Anterio Poliomyelitis, or Infantile Paralysis Infectious, or Strictly a Sporadic Disease?

I fully realize that the subject of this paper is one that has been fully and frequently discussed during the past few months; hence I cannot hope to advance any new idea on the subject, but, should the discussion of my paper clear up a few points, I shall feel amply paid for my pains. Holt, in *The Diseases of Infancy and Childhood*, says: "The essential cause of this disease is yet unknown." Yet he ascribes the causes as incident to other diseases of childhood, as measles, scarlet fever, etc. Others, he says, consider the disease due to dentition, traumatism, etc. Hughs says practically the same. Caille regards this ailment as an acute infection localized in the chord. Other authors consider the disease infectious. It is without doubt a disease of childhood, though adults may have it.

All authors that I have consulted regard certain climatic conditions favorable to its development. I have read several articles in medical journals recently, in which the disease was considered highly infectious. The author of one of these articles regards the disease as contagious. I have forgotten the name of the writer—even the journal in which I read the article—but he was writing I believe, upon the epidemic of infantile paralysis in Ohio. He mentions several adults that died of this disease—one, past middle age, who went to the burial of a friend who died of poliomyelitis, and in that way contracted the disease and died.

My experience with the disease is that it is not contagious, and, if infectious at all, only sparingly so, but sporadic in its origin, influenced by climatic conditions.

In Red River Parish there were nine cases of infantile paralysis from March 1 to about August 1. None since, so far as I have been able to ascertain. None of these nine died. Two of the nine were affected in the upper limbs, and have gotten well. All who were paralyzed in the lower limbs, so far as I know, are still paralyzed.

There are three of these cases that I haven't a complete history of. Of the total nine cases, only two have had an opportunity of contracting the disease from any other case. In fact, only one that I am positive of.

Mrs. X left Coushatta, February 10, with a one-year-old baby girl for a little town in the southern part of the State. She saw no sick children on the train or in hotels where she stopped. After reaching her destination she boarded with a family where there were no children. The nurse kept the baby at home, while the mother taught school. There were no cases of infantile paralysis in this town, so far as the mother knew, but just two weeks from the time they left Coushatta the little fellow took fever, which proved by results to be acute poliomyelitis. On March 1 the child was brought back to Coushatta, the fever giving way about two days later. About sixteen days from the beginning of the fever, or eight days after the fever had given way, a little boy two years old ate refreshments from the same plate with the infected child. Eight days later this little boy took fever, which left him paralyzed in the upper limbs. At the time the little boy was found to have fever there were a number of children at a birthday party of an older brother. The fever was mild, and for the first two or three days the child was in his grandfather's store and on the street, where he was with other children. No others contracted the disease.

The latter is a positive case of exposure, and the former the probable, or at least possible, case. The other children lived in isolated parts of the country, and had no opportunity of exposure whatever. While other children were exposed to most, if not all, of these nine children, no others contracted the disease. Hence it seems that infantile paralysis is a sporadic disease of early childhood, influenced by climatic conditions, and slightly infectious.

COUSHATTA MEETING, APRIL 3, 1912.

DR. E. R. HARRINGTON, of Natchitoches, presented a paper on

Non-Specific Congestive Endometritis.

With this subject we are all familiar, and at times it has no doubt taxed our resources to the limit and caused us to give up in despair.

Congestive endometritis is an inflammation of the corporeal endometrium, which is always subacute or chronic in character, accompanied by hyper-secretions of the utricular glands. As a rule, it is characterized by a general hypertrophy of the mucosa, but in chronic cases of long standing you may find atrophic changes present.

CAUSES.—These are varied, but are due to any condition that produces congestion of the uterus or stasis of the pelvic contents.

The following are the chief causes: Uterine displacements, flexions, or prolapse; tumors, either uterine or pelvic; subinvolution; lacerations of the cervix; adhesions; tubal disease; suppression of menstruation from exposure to cold or cold douching during the menstrual period; chronic constipation; sexual excesses; improper wearing of clothing, as tight corsets or high-heel shoes.

SYMPTOMS.—The disease develops slowly and is subacute from the beginning. Its onset, as a rule, is so insidious that the patient cannot remember the time when the leucorrhœal discharge appeared. Many of the symptoms complained of are not due to the changes in the endometrium, but to the causative lesions and associated complications. Thus, there may be a lacerated cervix, a displaced uterus or pelvic adhesions, which may change the local and general manifestations of the endometrium itself.

The following are the chief symptoms: Leucorrhœa, hemorrhages, menstrual disturbances, pain, sterility or abortion.

Leucorrhœa is a hypersecretion of the utricular glands, which is usually thin and of a serous appearance, but may become mucopurulent or purulent at times. In some cases it may have a milky appearance, and at others it may be mixed with the blood. It is usually without odor, and non-irritating. When the patient is uncleanly, decomposition may occur, and same may become very offensive, leading you to suspect malignancy.

The quantity and character of the leucorrhœa depend on the variety of disease and condition of the endometrium. The discharge is profuse in hypertrophic, and scant in atrophic endometritis. The congestion incident to the menstrual epoch increases the discharge. Unless the mucosa are decidedly hypertrophied, menstruation is not affected. Menstruation, however, is sometimes very painful, especially when there is excessive hyperemia.

Pain, as a rule, when present, is due to the causative lesion,

and not to the endometritis. Very often we have local and reflex pains that are traceable to the inflamed mucosa, and there may be headache, occipital or vertical; pain in the lumbar or the hypogastric region, and a burning sensation just behind the pubes.

Sterility and abortion are often the results of endometritis, as the mucosa become so altered by the disease that they do not furnish suitable attachments for the ovum.

THE GENERAL SYMPTOMS are neurasthenia, nervousness, hysteria, more or less depression, lack of desire for mental or physical exercise, lessened appetite, anemia, which may be due to menstrual irregularities; constipation, which aggravates the existing condition.

DIAGNOSIS is made from the history, symptoms and physical signs. The history, as a rule, is of very little value; the symptoms have been outlined, the leucorrhea being the only one of a subjective nature, which means very little until its origin is ascertained, which may arise from the cervix, cavity of the uterus, tubes or a pelvic abscess, by way of a sinus. But we must bear in mind that a leucorrheal discharge, in the majority of instances, is of uterine origin, and may assume that the endometrium is the seat of disease.

By the sense of touch we ascertain the position of the uterus, the size, shape and consistency of it; also whether or not there are lacerations or involutions.

The speculum brought into play will reveal to us the origin of the discharge. The speculum also shows the shape and size of the cervix, and the extent of lacerations.

DIFFERENTIAL DIAGNOSIS.—Congestive endometritis may be mistaken for the following conditions: Incomplete abortions, discharges from the fallopian tubes, and pelvic abscess. The differential diagnosis of congestive endometritis is, as a rule, not difficult, unless there is a purulent or hemorrhagic discharge present. Usually there is not the slightest evidence to suspect malignant disease; as a rule, when the discharge is from the fallopian tube, it is more or less intermittent and accompanied with pain, the discharge being purulent and profuse, ceasing as soon as the sacculated tube is evacuated, but reappearing as the tube refills, and is accompanied by painful intermittent contractures. These patients, as a rule, have a history of some form of infection, followed by chronic inflammation of the pelvis. A pelvic abscess is more apt to rupture into the rectum or vagina than the uterus.

Congestive endometritis seldom causes grave pelvic complications. The practice of intrauterine applications, the use of a sound or careless antiseptic operative procedures, may cause infection and transform a simple endometritis into a grave condition, which may cause death or greatly impair the future health of your patient. The cause should always be ascertained, if possible, and removed, and finally, if the treatment is not intelligently and properly carried out, the results will be very disappointing.

TREATMENT.—Treatment is divided into prophylactic, removal of the cause, and cure of the diseased condition.

A knowledge of the cause, and prevention, are essential features in prophylaxis. Although many of the causes cannot be controlled, in many cases they can be prevented, as the condition is often due to traumatism of labor, improper care of the puerperal state, and injurious habits, which are causative factors that can be guarded against.

There is always a definite cause that we may or may not be able to ascertain, and, in the event of failure to do so, our treatment will accomplish nothing, or, at best, very temporary results. For example, if the cause be flexion, laceration of cervix, or pelvic tumors, the prime factor is to remove the specific lesion, and at the same time, or subsequently, to treat the diseased endometrium. This can very easily be done at the time of removal of cause, if it be lacerated servix. You can dilate and curet.

In others, however, dilating and curetting may cause dangerous or serious traumatism due to adhesions.

When the disease is not caused by pelvic lesions, but by sexual excesses, constipation or clothing improperly worn, imprudence during menstruation, in addition to the correction of same and curettage, a special plan of treatment, both general and local, to relieve the pelvic congestion, is demanded.

The food should be nutritious and easily digested; meats should be given very sparingly; plenty of good water should be drunk between meals. The bowels should be opened daily, as constipation tends to increase pelvic congestion and adds to the local trouble.

Salines are best in small daily doses, or as a weekly purge, supplemented by daily laxatives; regulated exercises are very beneficial, as riding and walking; bicycling should be prohibited.

The local treatment is an important factor in diminishing the

congestion. A vaginal douche of one or two gallons of hot normal salt solution should be used morning and night, the patient remaining in the recumbent posture, with the syringe only a few feet, say three or four, above patient, so the flow will be slow, and at fifteen or twenty minutes consumed at each douching. An improvised Kelly pad can be made in the following manner: Take one or one and a half yards of oilcloth, supported by three pillows—one under the back, one between the buttocks and the feet, and one to the side. Twice a week the vault of the vagina should be painted with iodine; the cervix also. Each day you can use a tampon of cotton wool saturated with a 25% ichthyol and glycerin solution. A very nice method of tamponizing is with the tampons already prepared, which can be procured with any medication desired. They are put up in gelatin capsules, which are readily soluble at the temperature of the parts and in the presence of the secretions. They are removed before the next douche.

Depletion of the cervix is sometimes necessary, and can be done very effectually by first introducing the speculum and drawing down the cervix with a tenaculum and using a small, sharp bistoury, making deep, short incisions, allowing about one ounce of blood to escape. If the bleeding is not sufficiently free, use a pledget of cotton saturated in warm water, or, if too free, use the pledget with hot water, which will effectually control same.

The douching should be continued twice daily for three or four months. The curative process is the dilatation and curetting, which is best accomplished during the intermenstrual period, on account of the lessened congestion of the parts.

The cavity should not be packed, as that tends to interfere with free drainage; the slight bleeding generally ceases in a few hours.

The patient should remain in bed for two or three weeks after the operation; though this is a longer period than absolutely necessary, we all know that there is nothing so effectual as rest to relieve a congested part.

The frequent treatment by caustic applications should be condemned, as they are useless and may prove harmful, and a cure can only be effected by the removal of the cause (the diseased endometrium). Sometimes the leucorrhœal discharge returns, and necessitates a second operation.

DR. A. C. McLAMORE, of Gahagan, La., presented a paper on

Open Treatment of Fractures of the Shafts of the Long Bones.

While this subject is yet being debated among some of our most eminent and experienced surgeons, we are to be governed somewhat by our own experience, which is the best teacher by which man is taught.

Of course, the saying is that the carpenters cover their mistakes over and the doctor buries his, but this will not hold good in cases of fracture badly put up, as it seems that we meet them more often than any other. While we can, and do in many instances, get these fractures put up accurately, at the same time we cannot always do it. With the present technic of asepsis, there is no danger of the open method, by which we can see exactly what we are doing. With the splendidly-prepared plates, screws and pins, properly applied, we can be sure of our results, as we can soon tell the nature of the fracture and select the plate, screw or pin, or the ligature, as may be best suited to the particular case. We are familiar with the fact, of course, that all these fractures cannot be treated with the same appliances.

Professor Robert T. Moore, of the New York Polyclinic, does this operation under the fluoroscope. He introduces the tracer to the point where he wishes to drill, then withdraws the tracer and introduces the drill through the canula, and then applies the pin. But as we country practitioners are not supplied with the fluoroscope, and many other advantages that Dr. Moore has, we have to content ourselves with the knife and assistance of one of our hard-working old brother-practitioners to perform this operation in a cabin, or, at the best, as a rule, under many adverse circumstances.

I readily call to mind a patient to whom I was called in 1908—a white male patient, age 22 years, whose occupation was working at a stave-mill. While trying to replace a belt, while the machine was in motion, he was caught, stripping all the flesh from the index and middle fingers and fracturing both bones of the forearm. I reached him two hours after the accident and found him greatly exhausted from pain and loss of blood. Now, I was face to face with an open wound and fracture, the treatment of one conflicting with the other. I dressed the hand, set the arm, putting on splints longer, really, than I thought safe to the hand, but knew that

nothing shorter would hold the fracture in place. I allowed the appliance to stay forty-eight hours, when he complained of the hand giving him pain. On removing the dressing I found the open wound infected, so advised that he be removed to the North Louisiana Sanitarium, where I was complimented by Drs. Abramson and Hands for the correct apposition in which I maintained the arm under the existing conditions. As the patient was talking of suing the company, Dr. Hands and I took a skiagraph, and, to our surprise, found the bones lapped nearly one-half inch. Under an anesthetic, we undertook to put it up accurately, which we were sure we did, trying the plaster cast dressing. We found it did not suit the case. Dr. Abramson then suggested that we remove it and apply the splints, which I had placed on at first, removing the two fingers. The hand was dressed and the patient placed in bed. This was finished about 11:30 a. m., and Dr. Hand suggested that I call again about 8:30 p. m.; at that time we should take another skiagraph. In the second skiagraph, lo and behold! the same lapping was still present. The doctors suggested that we undress the wound and correct the deformity, but the young patient's uncle, a physician, though not very well acquainted with the rational treatment of such conditions, would not consent to this. The deformity exists to this day, in the way of shortness, not that you can detect any other deformity.

Now, gentlemen, if we had been allowed to have opened this up, after we had failed to correct it otherwise, and supplied the pins, there would not have been this deformity existing, which stands out to-day a monument of our mistake. We understand that in this instance of shortening it makes not so much difference, only from a medico-legal standpoint. Now, if this had been the leg, instead of the arm, it would humiliate us to the core each time we were compelled to meet the patient on the street; I say compelled, because we would not meet him unless compelled to.

I will close this subject by asking that it be discussed by my brothers, that I may profit by their wider experience, and to remind you that all of our mistakes are not buried.

MINUTES OF THE BI-PARISH MEDICAL SOCIETY.

The Bi-Parish Medical Society held its regular meeting at Couchatta, La., on Wednesday, April 3, 1912, with the following members present: Dr. W. L. Davis, Dr. C. E. Edgerton, Dr. A. C.

McLemore, Dr. J. T. Keator, Dr. E. W. Breazeale and Dr W. F. Sibley. Dr. F. F. Wimberly, of Ringgold, La., and Dr. W. W. Gahagan, of Coushatta, La., were admitted to membership. Dr. Younger, of Fisher, La., and Dr. D. T. Terry, of Coushatta, La., as guests.

On scientific papers, Dr. A. C. McLemore presented a paper on *Open Treatment of Fractures of the Shafts of Long Bones*. Dr. Harrington, being absent, forwarded a paper on *Gynecology*, which was read by the secretary. Dr. W. F. Sibley, a paper on *Medical Ethics*, requesting the members to discuss the subject, but not the paper. All three papers provoked quite an amount of comment and discussion.

Dr. Younger was introduced by Dr. Sibley, and gave a detailed account of the symptoms, treatment, etc., of epidemic *Cerebro-spinal Meningitis*. His talk was listened to very attentively, and a number of questions asked. He had recently treated eleven cases, with three deaths. He described the technic of administering anti-meningitic serum, giving the doses, etc.

Motioned by Dr. Sibley and seconded by Dr. Edgerton, that the resolution as offered at the last meeting, to have the Society meet quarterly, be tabled. Carried.

The election of officers being in order, the following were chosen for the ensuing year: Dr. W. F. Sibley, president; Dr. C. E. Edgerton, vice-president; Dr. E. W. Breazeale, secretary and treasurer. The following were elected as delegates to the State Medical Society: Dr. W. L. Davis, to represent Red River Parish, with Dr. A. C. McLemore as alternate; Dr. W. F. Sibley, for Natchitoches Parish, and Dr. E. W. Breazeale as alternate.

Dr. C. E. Edgerton, on behalf of the Methodist Ladies' Aid Society, tendered an invitation to a banquet. Invitations were also extended to a number of lawyers and professional men, and a total of twenty-one in number enjoyed a veritable feast, both of wit, wisdom and repartee, as well as all the delicacies and substantial that the market could afford. The ladies excelled themselves in the culinary art and service, displaying a charm that will be remembered for a long time.

There being no further business, the meeting adjourned to meet in Natchitoches, La., on Wednesday, December 4, 1912.

E. W. BREAZEALE, M. D.,
Secretary and Treasurer.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

Clara Barton.

Clara Barton, whose death was recently chronicled in the daily press, deserves more than a passing notice, for her life was full of accomplishments in line with the humanitarian aims of the medical profession.

She was born of Puritan ancestry about eighty-six years ago, received a fine education, and while quite young founded a seminary for girls. When appointed clerk in the Patent Office at Washington, she became the first woman to hold a regular clerical position in a government department.

As soon as the war between the States broke out she led in organizing the Sanitary Commission and devoted her time and energy to care for the sick and wounded. She served in the Federal Army of the Potomac, and was present at many of the most important battles of the war. The war ended, she organized at Washington the Bureau of Records of Missing Men, and it is said that she traced the fate of some 30,000 men.

She was visiting Europe for her health and was in Geneva at the outbreak of the Franco-Prussian war, and she at once joined in the work of the Red Cross Society, which had been founded a few years before; she helped to organize the hospital services, and personally nursed the sick and wounded. During the terrible days of the Commune in Paris she saw to the distribution of food and clothing to the needy.

Returning to the United States in 1873, she inaugurated a movement to secure the recognition of this Government for the Red Cross Society, succeeding in obtaining it only nine years later, when she naturally was selected as president of the American branch of the society founded by Dunan.

Among the notable occasions upon which she rendered valuable service to the afflicted were during the great fires in Michigan, the

Charleston earthquake, the floods on the Ohio and Mississippi rivers, and the Johnstown disaster.

She is the author of a history of the Red Cross Association, which has been published by the Government, and continued her interest in that philanthropic body all of her life, and devoted much of her personal resources to its objects.

Anent the Wassermann Reaction.

As many physicians seem to believe that the complement deviation test is quite dependable as a diagnostic and prognostic guide in syphilis, and this has led still more among the laity to think that there exists an easily applied blood test to determine accurately the presence or absence of the disease, it can serve a useful purpose to call attention from time to time to the evidence which is accumulating on both sides of the question.

Among conditions other than syphilitic which it has been claimed may lead to positive reaction are now included: tuberculosis, leprosy, neoplasms, yaws, articular rheumatism, active malaria, and lead colic.

Plehn has studied the results of two hundred cases, in which the blood was examined without any history being known by the pathologist. In forty-two, giving repeatedly a positive reaction, nine had attained an advanced age without ever having had any but the very earliest manifestations. Yet in some of the negative reactions were cases with "florid" manifestations of syphilis. He concludes that a positive reaction is no proof of the syphilitic character of any existing symptoms, while a negative reaction is not proof that they are not. He believes, with others, that the Wassermann reaction should be considered as one symptom only, and be given weight accordingly.

While we believe that a proper interpretation of the reaction is of value, we hope for a general realization of the fact that it is far from being absolute and exact.

Mortality Statistics.

Interesting and significant figures may be extracted from the bulletin issued by the Census Bureau regarding deaths during 1910 in the registration area of the United States, which is estimated to

contain nearly 60 per cent of the population of the United States proper.

The total number of deaths in this area was 805,412. Of these, 202,180, or a little more than a quarter, died at two years old or under. After this, the proportionate mortality diminishes rapidly, as from this age up to 39 years old only a little less than another quarter died, or 196,504. In other words, more persons died at and under two years of age than between two and thirty-nine years old.

On the other hand, it is somewhat comforting to those of us who are not as young as we used to be to note that more than 30 per cent of the total, or 252,026, lived to be over sixty years of age, of which nearly two-thirds, or 155,375, lasted over seventy years. Studying the latter figures a little more closely, we see that, of those who lived beyond fifty years of age, nearly half remained in this world until they were over seventy years old, while the very satisfactory number of about 60,000, or one in thirteen of the grand total, lived to be eighty years or more.

New Orleans Expedition to Panama.

On April 20, C. C. Bass, director of the Laboratory of Clinical Medicine in Tulane and professor in the Department of Tropical Medicine and Hygiene, left for Panama, accompanied by F. M. Johns, a member of the senior class in the Medical Department.

The particular object of the expedition is the study of the malarial organism on the isthmus and the perfection of methods of growth of the organism outside the human body. What the results may be is purely conjectural, but the JOURNAL desires to make notice of the first expedition from New Orleans for the study of tropical diseases, under the auspices of the Tulane University of Louisiana, and with modern methods and means of scientific research applied to the investigation undertaken.

This is not the first expedition sent out of New Orleans for the study of tropical diseases. In 1879 the late Stanford E. Chaillé, with R. Matas as secretary of the commission, studied yellow fever in Havana; and within the past ten years O. L. Pothier and Geo. E. Beyer, both of Tulane at the time of their work, studied the

mosquito in relation to yellow fever at Vera Cruz and in the vicinity of that city. Neither excursion, however, was related to university enterprise.

It is of particular importance that the present investigation goes out, as an expression of the beginning of scientific work in Central America undertaken by the newly organized department of Tropical Medicine and Hygiene in Tulane University, and it means the further interest in the work of this school.

The friendly co-operation of the Government officials at the isthmus has been assured, and the possibility of the undertaking has been brought about through the generosity of an anonymous benefactor of the school, who has contributed the bulk of the funds needed.

The interest in medical investigation seldom spreads to the laity sufficiently to encourage donations in sums of money, but the people of this city will be more benefited by the successful issue of experimental medicine than can be assured by a money standard.

It is to be hoped that the present project may prove successful and fruitful of great result, so that the achievement obtained may encourage a wide philanthropy in further endowments of preventive medicine research.

The A. M. A. Meeting.

The Secretary of the Southern Medical Association, Dr. Seale Harris, of Mobile, has issued an invitation to all Southern practitioners to join a party to go to the A. M. A. meeting in a body. He undertakes to make the arrangements if those who are going will notify him of their intention.

No better plan could be devised of bringing our contingent together than by a special train to Atlantic City, carrying the Southern delegation. The days en route would encourage a better acquaintanceship and would allow a discussion of matters of common interest to those in the close companionship such a mode of travel would occasion.

All who are interested should write Dr. Harris, at the Van Antwerp Building, Mobile, Alabama.

Abstracts, Extracts and Miscellany.

Department of Obstetrics and Gynecology.

In Charge of DR. P. MICHINARD and DR. C. J. MILLER, New Orleans.

BLOOD PRESSURE INDEX OF ECLAMPSIA.—H. C. Bailey (*Surg., Gyn. and Obst.*, 1911, xiii, 505) states that the average blood pressure in the last weeks of pregnancy is 118 m. m. of Hg. Fluctuations amounting to 30 m. m. of Hg. above this need cause no alarm. Blood pressure over 150 should be thoroughly investigated at once. Blood pressure in eclampsia, with convulsions, though usually in the neighborhood of 200 m. m. of Hg., may be as low as 155 m. m. Convulsions do not occur when the blood pressure is lowered by poor resistance, as in the so-called fulminant cases or when lowered by veratrum viride or other drugs producing collapse. Treatment should be directed, not toward reducing the blood pressure, but to the treatment of the toxemia, for the rise of blood pressure may denote only the resistance of the system toward toxins. Tri-weekly blood pressure examinations, combined with regular urine examinations for albumin and casts, offer the best safeguard against the unexpected pressure of this disease.—*Amer. Jour. Obst.* MILLER.

SYMPTOMS, THERAPEUTICS AND ETIOLOGY OF ECLAMPSIA, FROM STATISTICS OF 400 CASES.—Lichtenstein (*Arch. f. Gyn., Band XCV, Heft 1*, 1911) gives the conclusions arrived at from a study of 400 cases of eclampsia observed at the Frauenklinik at Leipzig. The mortality of eclampsia in the puerperal state is unusually high. The mortality after premature delivery is no better than after rapid delivery. It is very little less than the collective mortality. A great difference in eclampsia cases depends on the amount of blood lost; the puerperal eclampsias are coupled with little loss of blood, since in 90 per cent of these cases there has been a spontaneous delivery. The usual amount of blood lost in eclampsia is 500 c. c., or 100 to 150 c. c. more than ordinarily. Operative deliveries increase this loss of blood over spontaneous deliveries 40 per cent. We see that the results of premature or

rapid deliveries depend, not on the delivery of the child, but on the amount of blood lost. This loss of blood acts like a venesection. As a prophylactic treatment of eclampsia, withdrawal of blood is useful, because the poison is drawn from the mother's veins. After labor, venesection is indicated, because there has been little loss of blood in these cases. Curetment after delivery in eclampsia acts like the venesection. It is indicated to remove blood before labor in eclampsia, as a prophylactic measure. Statistics speak against the placental theory of eclampsia. In 30 per cent of cases which came to autopsy there was found dilatation of the ureters and pelvis of the kidneys.—*Ibid.*

MILLER.

VAGINAL CESAREAN SECTION: ITS TECHNIC, RESULTS AND INDICATIONS.—Cyrille Jeannin (*Progrès Méd.*, Oct. 21, 1911) says that the vaginal Cesarean section is applicable to all cases of induration and non-dilatation of the cervix uteri in pregnancy. The classical abdominal Cesarean section is applicable to conditions in which there is a narrowing of the pelvis, while the vaginal is never applicable in such cases. The Dührssen operation, as it is called, should have a place in surgical obstetrical practice. It is easy of execution, and, when done carefully and conforming to certain necessary rules, has few complications and causes few bad symptoms. It is indicated whenever immediate evacuation of the uterus is necessary and when the ordinary Cesarean section cannot be done on account of the condition of the woman. Again, it is indicated by a lack of dilatability of the cervical tissues. It is contraindicated by contractions of the pelvis, pelvic tumor, artresia of the vagina, very large fetus, abnormal implantation of the placenta, and previous infection. It is useful in the interest of the mother in eclampsia, separation of the normally implanted placenta, cardiac accidents, rigid cervix, and amniotic infection; in the interest of the child in prolapse of the cord, agony of the mother and death of the mother. It consists of incision low down of the cervix in the median line, anteriorly or posteriorly; a location in which hemorrhage is slight, below and outside the peritoneal cavity. The author thinks we cannot have too much room, so as to be able to see what we are doing. The uterus is drawn down, the anterior cul-de-sac opened, and the anterior wall of the cervix incised. The posterior lip is incised and the peritoneum separated. The child is extracted by forceps or version; the placenta delivered,

and the uterus tamponed with antiseptic gauze. Sutures are placed to close uterus and vagina, and the perineum is repaired. The prognosis is good. The complications are hemorrhage, tearing of the uterus, lesions of the peritoneum and bladder, and post-operative infection.—*Ibid.* MILLER.

Department of Internal Medicine.

In Charge of DR. E. M. DUPAQUIER, New Orleans.

PRACTITIONER'S NOTES ON MEDICAL LITERATURE.—As a real pleasure, the writer advises to look up old books for a diversion from the right hot news. It is amusing to pick here and there original ideas and to reflect on the bent and prejudice of an author, for, on the second thought, it is found that out of these ludicrous concepts much of the truth in the matter has been exposed like the grain of precious metal in the rough and variegated lithos.

Thus it is that the writer became deeply interested in the reading of Dr. Depierri's work on Tobacco, written in 1870. Tobacco, according to the author, is the cause of all our social evils. This universal poison is the cause of man's rapid degradation, he writes. Of the many evils caused by tobacco misuse and abuse, some are distinctly admitted by the most unprejudiced observers. For instance, the case coming to me lately, and which prompted this reading on Tobacco, partial loss of sight, that would rapidly become a total loss if just but one grain of tobacco would be indulged in for a time.

But, passing from this serious and sad subject to the pleasant ones, among which tobacco, it is said, leads to the extinction of the sexual desire and to impotency (now, you look out!) the writer of this note certainly was deeply moved when he read the affirmation that tobacco was one of the causes of the mysterious condition known as pellagra. Now, stir, seekers; here is something that is worth while noting. So far, the writer is not yet ready to present his data. Help him.—E. M. D.

PRACTITIONER'S NOTES ON HYGIENE AND PREVENTION.—The dropping of dogs' excrements on the streets is objectionable for

many reasons. Dessicating in the open, they form a part of that complex mixture called city air. Dissolved by rain and street sprinkling, they are spattered on clothings and smeared on shoes, and thus, carried into living-rooms or wiped on the rugs at the door, where quite often the baker leaves the family loaf to rest until breakfast-time. Thus the parasites in dogs' excrements find their way into man's body; at least, the etiology of many cases of hydatid cysts from the dog's *tenia echinococcus* is thus explained.

Dogs' owners should take care to collect their faithful companions' dejections in a recipient and commit them to the family toilets, instead of casting them, as it were, to the wind, which happens to be a public commodity, blowing in one's face, whether it is wanted or not.

Dogs, besides, transmit and disseminate *tinea tonsurans*, *tinea favosa*, tuberculosis, rabies, scabies, hydatids, typhoid fever through fleas, and the parasite *Dyphylidum caninum*. Being a sincere admirer of the canine redeeming features, the writer admits that the tender love of some people for dogs is a matter which is not disputable, and the right to keep dogs must be respected; but when a fellow biped picks up the pet's tird on ordinary days, and collects on rags and papers the pet's semi-solid discharges on purging days (Toutou takes his lax candy or biscuit nicely, Oh! Romulus Augustulus!!) . . . only to pitch them on the streets, well, then, the limit of privilege and tolerance is about reached. (A theme inspired by Professeur Blanchard's (Faculté de Paris) article: "*Le rôle du chien dans la transmission des maladies.*")—E. M. D.

PRACTITIONER'S NOTE.—Ehrlich's "606" can be administered per rectum, it is claimed, by Dr. Geley, of Annecy, France, with good results. The procedure is the same as the simple administration of other kinds of drugs per rectum. The solution is made as if it were to be used for intravenous injection. The patient's bowel, of course, is cleared first. No pain, no inconvenience follows. Absorption is rapid and complete. Effects seem to be the same as when the "606" is given intravenously. If after some time this novel way proves just as effective, it shall certainly facilitate the use of this remarkable remedy.—E. M. D.

Department of Therapeutics and Pharmacology.

In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

AGAR-AGAR AS A VEHICLE IN THE THERAPY OF INTESTINAL DISEASES.—Einhorn (*Berl. klin. Woch.*, 1912, No. 3, page 113) has found agar-agar, combined with different medicines, of considerable value. These combinations give up their medicinal agents gradually all along the intestine, while the agar-agar has its well-known effect of attracting and holding water, and thus increasing the volume of the feces, and at the same time of rendering them softer. The chosen drug is brought into solution in a boiling solution of agar-agar, well mixed, and then evaporated to its original dry consistency. He recommends the following combinations: No. 1.—Phenolphthalein-agar, each level teaspoon containing one-half grain phenolphthalein. No. 2 contains 15 minims fluidextract of rhubarb. These, in doses of one teaspoonful morning and evening, are useful in cases of constipation.

No. 3.—Columba-agar, each teaspoonful, containing one-half drachm of the fluidextract, he has found valuable in cases of colitis showing much mucus in stool, but otherwise normal defecation. The average dose is one teaspoonful three times daily.

No. 4.—Gambir-agar, half a drachm of the tincture to the teaspoonful. No. 5.—Tannin-agar, one-half grain in each teaspoonful. No. 6.—Simaruba-agar, 15 minims of the tincture to the teaspoonful; and No. 7.—Myrtill-agar, 15 minims of the tincture to each teaspoonful, have all been used with advantage in acute, but especially in chronic diarrheas. The myrtill-agar is used especially in enteritis in diabetic patients. Sumbul-agar, of which one teaspoonful, and No. 7—Myrtill-agar, 15 minims of the tincture to advantage in a number of cases with intestinal affections of nervous origin.

He also suggests that ipecac-agar, 15 minims of the tincture to the teaspoonful, may be useful in amebic dysentery. Of these various preparations, the usual dosage is a teaspoonful taken three times a day after meals and in water. These preparations are obtainable from Eimer & Amend, New York.—J. T. H.

ADALIN.—Trangott (*Berl. klin. Woch.*, 1912, No. 3, page 115), as a result of an exhaustive review of the literature about this

recently introduced drug, reaches the following conclusions: In its chemical nature it resembles veronal. In the sleeplessness of the insane, the majority of the authorities cited report favorably of its effects. In ordinary nervous insomnia, from all sides he finds that its action is extremely satisfactory. In these cases the dosage recommended ranges from 6 to 15 grains, taken one-half to one hour before retiring, usually in a warm drink. In insomnia of various origin it has been found equally useful in similar dosage. As a sedative in the psychoses, in dosage of 3 to 5 grains three or four times a day, its action is usually all that can be desired, although at times it produces a hypnotic effect. It appears to be valuable as a sedative or hypnotic in many other conditions, such as heart disease, nephritis, neurasthenia, and, in fact, in nearly all conditions where a simple hypnotic appears to be indicated.

A number of authors have used it in children in relatively large dosage (3 to 8 grains in children aged from two to twelve years). One author has used it with good effect administered occasionally during whooping-cough. Thus far there are no reports of serious bad results, nor of any idiosyncrasy. It appears to have little or no unfavorable effect on circulation, respiration or digestion. In one case, through an error, three grams, in another four and a half grams, and in still another nine grams were taken, and in none of these cases were there any serious results. One advantage claimed by many for this new hypnotic is that rarely do the patients complain of any disagreeable feelings on the day following its administration. It may be administered by rectum if this be desired. One gram of adalin is dissolved in four ounces of normal salt solution, to which two drachms of normal sodium hydrate have been added.

If all of the above is true, we have apparently at last an almost ideal hypnotic, but we must not be too sanguine, for past experience with many much-lauded new drugs has shown us that further experience with them usually means the discovery of many disadvantages not apparent in their earlier trials.—J. T. H.

POST-DIPHTHERITIC PARALYSIS.—Crohn (*Meunch. med. Woch.*, No. 2, 1912, page 84) reports astonishing success in treating three of these cases with diphtheria antitoxin. In these he gave only one or two doses of 1,000 or 2,000 units. Other authors have used the antitoxin with success in the treatment of these paralyses, but

have made use of much larger and frequently repeated doses. Crohn thinks his experience indicates the efficiency of small doses, and therefore sees no necessity of the large or the repeated dosage.

In spite of the fact that in these cases no disagreeable or alarming anaphylactic phenomena occurred, it would seem the part of prudence to first test the patient with very small doses of horse serum in all cases where the original attack of diphtheria had been treated with serum.—J. T. H.

DIPHTHERIA.—F. Meyer (*Berl. kl.*, 1911, No. 45) reaches the following conclusions as regards the therapy of diphtheria: Intravenous administration of the antitoxin will save some cases who are so far gone that the subcutaneous administration will be ineffectual. Intramuscular administration also gives quicker results than the ordinary subcutaneous. He considers that there are great advantages from large initial doses, never less than 3,000 units. On account of the development of our knowledge of anaphylaxis, he is against the prophylactic use of the serum except in case of weakly or sick children who have been most directly exposed to infection. He warns that asthmatics and others with chronic disease of the respiratory organs are especially likely to suffer from disagreeable results from the injection of horse serum.—J. T. H.

GLUCOSE INJECTIONS.—Kausch (*Deut. med. Woch.*, 1911, No. 1) states that he has had good results from the intravenous injection of 10 per cent. glucose solutions in various conditions. The editor would in this connection call attention to the value of the administration of glucose in a 5 per cent. solution, either alone or combined with other substances in the form of a Murphy drip.—J. T. H.

CALCIUM CHLORID AS A DIURETIC.—Vitry (*Presse, med.*, 1911, No. 61, page 633) reports that chlorid of calcium in a daily dosage of seven to fifteen grains as a diuretic has given good results in certain cases of nephritis.—J. T. H.

TREATMENT OF STRYCHNIN POISONING WITH CHLOROFORM.—Shakler reports an original research on this topic in the *Philippine Journal of Science* for December, 1910. He concludes thus:

1. Dogs poisoned with doses of strychnin which are certainly fatal may recover from the effects of the strychnin if properly treated with chloroform, together with the intravenous injection of liberal quantities of Ringer-Locke solution.

2. Better results are obtained if the chloroform is given by intratracheal insufflation and in uniform concentration, as low as consistent with the condition of the patient.

3. Dogs saved from strychnin death by means of chloroform are likely to die later of chloroform poisoning.

4. Chloroform is far inferior to ether for the treatment of strychnin poisoning, and probably for the treatment of convulsions in general.

5. Further experiment is necessary to determine the merits or demerits of atropin and of morphin in the treatment with chloroform of strychnin poisoning.—J. A. S.

THE PHARMACOLOGICAL BASIS FOR AN INTRAVENOUS ADRENALIN THERAPY.—Straub, writing in the *Munchener Medicinische Wochenschrift*, 1911, No. 26, asserts that adrenalin does not exert a cumulative effect. It only affects the blood-pressure when it comes into direct contact with an artery—*i. e.*, when it is injected intravenously. The intensity of the action depends entirely upon the concentration of the solution, which is rapidly destroyed in the circulation. Therefore, the rapid injection of concentrated adrenalin solutions is dangerous to the human organism, while the slow intravenous infusion of weak solutions produces a continual increase in blood-pressure in proportion to the rapidity of the flow. This demonstrates that it is a mistake to determine a maximum dose for adrenalin, since the action of the remedy is not dependent upon the total amount administered, but the amount of adrenalin that is brought into action during a given unit of time. All the various indications of the effect of adrenalin upon the pupil, heart, uterine muscular tissue, etc., may be placed under one head, namely, the irritation of the sympathetic nerve.—J. A. S.

DIAGNOSTIC IMPORTANCE OF PEPSIN IN THE URINE WITH GASTRIC CANCER.—Scholz reported recently that no pepsin was found in the stomach content or urine in his cases of uncomplicated gastric achylia, while with gastric cancer and achylia there was no pepsin in the stomach contents, but more or less peptic ferment was found in the urine. His statements, based on sixty-six cases, have been challenged by certain others, but he reiterates here that renewed research, which he describes, has confirmed the accuracy of his first statements. Consequently he reaffirms that, in dubious

cases of gastric cancer, strong presumptive corroborative evidence is afforded by the discovery of pepsin in the urine with the gastric juice, after a test breakfast, is free from pepsin, and this finding is confirmed also after a bouillon breakfast.—*Berl. Deutsche Medizinische Wochenschrift*.—J. A. S.

THE WASSERMANN REACTION AS GUIDE TO TREATMENT IN SYPHILIS.—Citron regards the Wassermann test as supremely important for determining the necessity for treatment, permitting individualization in each case, and thus filling a long-felt want. The test must be made with the original technic, and should be repeated at intervals. Every return of a positive reaction should be regarded as a sign of active syphilis. He has made a point of testing the wives and children of syphilitics free from symptoms except a positive reaction, and he has found that they give a positive reaction in a surprisingly large proportion of the apparently healthy. This asymptomatic syphilis, in many cases, runs into an aortic affection, aneurysm or aortic insufficiency, tabes or paralysis. He comments on the remarkably large proportion of patients whose primary manifestation escapes their attention, his experience confirming Fournier's that fully 50 per cent of the tertiary syphilitics have no knowledge of any primary sore. The aim of treatment should be to transform a positive into a negative Wassermann reaction; the later specific treatment is commenced, the harder it is to accomplish this. The Wassermann reaction permits an estimate of the therapeutic effect of drugs, and salvarsan, while putting to other manifestations of syphilis, does not always insure a negative reaction. Mercury should still be the main reliance, possibly associated with salvarsan.—*Berl. Therapeutische Monatshefte*.—J. A. S.

TREATMENT OF ERYSIPELAS WITH DIPHTHERIA ANTITOXIN.—Polak (*Klinisch-therapeutische Wochenschrift, Jahrg. 18, No. 17*) has used diphtheria serum in the treatment of erysipelas for the past two years. In most cases the results have been surprisingly good. The fever sinks to normal in twenty-four to thirty-six hours, and does not rise again, nor do any complications occur. Coincidentally with the fall of temperature the edema and redness disappear, and the appetite returns. In cases in which the temperature did not fall in two days, a second injection brought it

down promptly. Injection was made in all cases, even when treatment promised but little, or when there was doubt as to the diagnosis between erysipelas and lymphangitis or other affections.

The experience of the author has been that, of all means of treating erysipelas, that by means of diphtheria serum gives by far the most certain results. For the purpose of comparison, serum was injected in puerperal infection, mastitis, osteomyelitis, phlegmon and furunculosis, conditions supposed to be due to streptococcus infection, but without any appreciable good results.—J. A. S.

ADRENALIN IN THE TREATMENT OF SEVERE CASES OF MEASLES.—In a clinical lecture (*Die Therapie der Gegenwart*, June, 1911) that takes in the whole scope of the therapy of measles and broncho-pneumonia, Prof. Baginsky makes the following reference to the use of adrenalin in the extreme prostration that sometimes complicates measles. After speaking of the use of excitants and stimulants, and warning his colleagues against the administration of digitalis, the author said: "The subcutaneous injection of adrenalin in combination with physiological salt solution might, on the contrary, be essayed with a great deal more confidence.

"I would suggest the use of a physiologic salt solution, not to exceed four per cent in strength, in moderate quantities, so that not over 100 c. c are injected into children of one to two years, and not over 150 to 200 c. c. into older children at one time of a mixture consisting of one to two grammes of the physiologic salt solution. There is nothing peculiar or specific about this treatment, as it is frequently employed in conditions of collapse."—J. A. S.

Miscellaneous.

THE MEDICAL PROFESSION TO-DAY.—Robinson concludes a strong, convincing paper as follows:

1. The medical profession of the present day is fully alive to its duties and responsibilities.
2. Medicine of to-day is thoroughly scientific in its methods, employing the same means of experimental investigation and demonstrations as are employed by the other exact sciences.

3. Medicine of to-day is not shackled by the chains of authority and tradition. On the contrary, every dictum of any so-called authority, and statement regarding any drug or method of treatment, which has been handed down for the ages from text-book to text-book, is called into question, is carefully analyzed and dissected, and, if found wanting, discarded. Many drugs which were considered stand-bys by our forefathers have been thrown out from the Pharmacopeia, though they may still be used by old grannies.

4. The profession of to-day is broad-minded and is willing to investigate any remedy or method of treatment, no matter from what source it may come; it is willing to give a trial to any suggestion if it has a grain of common sense to it, even if the suggestion comes from a quack.

5. The evils which the medical profession is guilty of are not inherent in the medical profession as such; they are the result of our social conditions, of our immoral competitive system, which makes men fight and cut each other's throats in order to make a living, and these evils are much more in evidence in other trades and professions—the legal profession, for instance.

6. The medical profession not only does its duty by the public, alleviating suffering, restoring hundreds of thousands of men and women to health and active, useful lives, but we are making progress from year to year, we are making new discoveries, dealing with the larger problems, increasing the average duration of life, improving sanitation, etc. In short, we deal now not only with individual, but with national problems.

In judging of the life of any man, of the activity of any party, of the value of any movement, of the achievements of any profession, we do not take any single acts or incidents, but we take the sum total. If we take the sum total of the activities of the medical profession, if we subtract all its shortcomings, if we admit even everything our enemies say about us, the balance of good is overwhelmingly in its favor, and it can truthfully be said to be the most beneficent, the most progressive, the most humane and the most altruistic of all professions.

And, therefore, to the question, "What is the matter with the doctors?" I must answer, "There is nothing the matter with the doctors. They are all right."—*American Medicine*.—J. A. S.

UTILIZATION OF FATS AND OILS GIVEN SUBCUTANEOUSLY.—

Mills and Congdon (*Arch. of Int. Med.*, 1911, VII, 694) draw the following conclusion from their experimental work of injecting various fats and oils subcutaneously into animals. Olive, peanut, cocoanut, sesame, cottonseed, lard oils, unsalted butter-fat, and lard may be given hypodermically and over a considerable period without local irritation, provided aseptic care is used and no constitutional disturbance occurs, and provided precautions are used to prevent injection into the bloodstream. Emulsions of these oils made with three or four per cent of egg lecithin and water are permanent, and cause no irritation if given subcutaneously. Oils and fats given subcutaneously are absorbed by means of the lymphatic system, and eventually reach the thoracic duct. Lymphatic vessels and glands in contact with and transmitting oil for any length of time become hypertrophied, and are thus better able to carry oil. The amount of absorption of plain oil from the subcutaneous tissues after injection during starvation is so small as to be negligible. Emulsified oils and fats injected during starvation are absorbed in amounts sufficient to furnish from one-half to two-thirds of the full calorific requirement of the animals injected. Oils and fats so injected and absorbed have no more influence on the destruction of protein in starvation than has fat given alone by mouth. Plain oils injected subcutaneously under conditions of low protein ingestion are little, if any, better absorbed than when similarly given during starvation. Emulsified oils injected under these conditions are absorbed quite as well as similar oils given to starving animals. Plain and emulsified oils are absorbed about equally well when the animals injected are given a plentiful supply of protein in their food. This probably furnishes the large quantity of lipolytic enzymes necessary for body action on plain oil. The injection of oil subjected to lipolysis causes death, which is due apparently to the production of oelic or other acids, with the possible formation of toxic quantities of soaps. Oil absorbed from the tissues after subcutaneous injection is (1) burned in the body for the production of heat and energy, thus sparing the body fat; (2) retained as such within the organism; or (3) possibly converted into body fat by reconstruction in the liver, from which it may be sent for storage to the various fat depositories, after which it is drawn on as needed. Proof of this last proposition is lacking. It seems likely, from comparative

examination of the iodine indices of the ether extracts of visceral and adipose tissues, that the actively functioning viscera use oil and fat absorbed after subcutaneous injection for the direct performance of their functions, and that the storage of the foreign fat given in excess of the nutritive requirement takes place principally in the subcutaneous tissue, liver and lungs, to a small extent in the kidneys and spleen, while the pancreas, stomach and intestines are practically uninfluenced. This demonstrates that, after injection under suitable conditions, oils can be absorbed to an amount capable of covering so large a proportion of calorific requirement suggests the application of such injections to the treatment of wasting diseases, to the cachectic conditions associated with imperfect metabolic processes, and especially to tuberculosis, in which the intolerance to fats is almost symptomatic.—J. A. S.

ointments, WITH SPECIAL REFERENCE TO THE SUBSTANCES USED AS BASES.—Wild tells us, in the *British Medical Journal* of July 22, 1911, that a number of experiments have been made to determine the relative protective and penetrative powers of the various bases, and also the extent to which certain active drugs were absorbed by the skin when applied to it in the various combinations. The experiments were made by rubbing a carefully weighed quantity (usually ten grains) of the ointment or base into a definite area of skin (usually twenty square inches) for a fixed time. The ointment was then scraped off the rubbing finger and the surface of the skin by a dulled Gillette safety razor blade fixed in a convenient handle, and again weighed. To avoid the necessity of wiping the instrument, the scraper is weighed with the ointment both before and after rubbing. With a little practice, consistent results may be obtained. The loss of weight represents the amount of ointment absorbed, together with the amount lost in manipulation; as the latter is fairly constant in dealing with preparations of a similar consistency, the results afforded a relative indication of the respective amounts absorbed. There may, of course, be a possible slight gain from secretion and epidermis removed from the skin by scraping, but, if the skin be dried before the rubbing, experiment has shown that this factor may be neglected, as it is the same for each application and does not affect the relative results.

These experiments are still in progress, but sufficient results

have been obtained to confirm the generally accepted views as to the relative penetrative powers of the usual bases.

Soft paraffin and paraffin ointment appear to be hardly absorbed at all, but remain on the skin as a protective layer for a considerable period. Lard and olive oil are absorbed to a considerable extent, about 15 per cent, after two minutes' rubbing. Hydrous wool-fat, 20 per cent, provided the proper amount of water is present; old samples partially dried are less absorbed. Owing to its powerful adhesive properties, no reliable result was obtained from anhydrous wool-fat.

The greatest loss of weight occurred from a mixture of equal parts of glycerin of starch and hydrous wool-fat, which is a useful base when a comparatively non-greasy emollient is required.—J. A. S.

Medical News Items.

NEW HOSPITAL INTERNS.—The new interns who passed the recent examination for service at the Charity Hospital are as follows: Allen M. Ames, Emile Bloch, Muir Bradburn, W. P. Bradburn, Jr., P. J. Carter, Arnott K. Duncan, F. Graffagnino, C. S. Holbrook, William S. Hamilton, Jr., Adolph Jacobs, John McKowen, W. C. Payne, Warren F. Scott, John Signorelli, Alvin H. Strauss, W. O. Williams and Monroe Wolf. The successful candidates at Touro Infirmary were: F. H. Craddock, W. A. Reed, C. E. Gibbs, J. F. Dicks and B. M. McKoin.

RESULTS OF TUBERCULOSIS STUDY TO BE SUBMITTED.—The results of the proposal made at Washington International Tuberculosis Congress in 1908, by the late Prof. Robert Koch, for a thorough international investigation of his theory of the non-transmissibility of bovine tuberculosis to human beings will be made known at the coming Tuberculosis Congress in Rome. American, English, French and German bacteriologists will read reports detailing the results of exhaustive experiments carried out by the leading scientists in their respective countries in the past four years. Dr. E. C. Schroeder, of Bethesda, Maryland, has been sent by the Secretary of the Agricultural Department as one of the official representatives from the United States.

TELEPHONES AND PHTHISIS.—Dr. Spitta, of St. George's Hospital, London, has recently undertaken a thorough investigation to determine the possibility of the communication of tuberculosis through the use of telephones. Washings were prepared from the mouthpieces of telephones which had been in use at the busy call-offices in London for various periods, and tests were made by the inoculation of guinea pigs to ascertain the presence of tubercle bacilli. Dr. Spitta reported that the mouthpieces examined were free from tubercle bacilli. To remove any possible doubt, it was arranged that telephones should be fitted in the wards of a sanatorium and used only by patients in different stages of pulmonary tuberculosis, with the result that no tubercle bacilli were found. Dr. Spitta is of the opinion, in view of the whole course of the experimental work, that the transmission of tuberculosis through the medium of the telephone mouthpiece is practically impossible.

CANCER IN FINLAND.—A recent report from Finland shows that eight times as many men have cancer of the lip as women. Cancer of the stomach is about as common in women as in men. The cancer commission was appointed by the Finnish Medical Society and made a study of the cancers in the hands of 313 physicians. It is pointed out that cancers are less common in the upper class than in the lower class of Finland.

CELLS OF OUR BODY NEVER KNOW WHAT FOOD WE EAT.—At a recess meeting of Swiss men of science, Prof. Emil Abdehalden concisely defined a modern viewpoint of nutrition which is rapidly becoming prominent when he said, "The cells of our body never learn what the character of the food which we eat really is." Before they leave the alimentary tract the foodstuffs which we eat are broken up into fragments that serve as the real food of the body. Complex carbo-hydrates are resolved into sugar; fats are split into glycerol and fatty acids; proteins yield an aggregation of characteristic substances. Indeed, the main function of digestion is to put these comparatively simple "building stones" at the disposal of the internal tissue cells, so that they can select or further rearrange them as the special functions require. Whether it is meat or cereals that we eat is, after all, largely a matter of indifference, for they all furnish similar digestion fragments, so long as the digestive processes perform their duty.

SCIENTIST'S BRAIN IS SMALL.—The brain of Dr. John H. Musser, the noted diagnostician, was found to be not as heavy as the brain of a well-developed child. It weighed twenty ounces less than the brain of Daniel Webster and twenty-four ounces less than the brain of James Fisk. Scientists explain the extraordinary light weight of the brain of Dr. Musser by declaring that he developed along one line, not broadening out in all lines. The convolutions in his brain showed that he exercised portions of it to a remarkable extent. Dr. Musser was one of a little group of scientists who had agreed to leave their brains to the Wistar Institute of Anatomy and Biology.

ANTI-TUBERCULOSIS CANVASS.—The Louisiana Anti-Tuberculosis League will have its annual house-to-house collection on May 22. It is announced by the Anti-Tuberculosis League that it is filling dates for lectures in a number of the Catholic schools, and, through the co-operation of Superintendent Gwinn, lectures will be held in the public schools on Friday afternoons. The League extends an invitation to all churches and societies and schools, irrespective of color or creed, to make engagements for these practical educational discourses, which are absolutely free. All applications should be addressed to the League's free clinic, 1309 Tulane avenue.

AMENDMENT TO THE MEDICAL PRACTICE ACT.—The Louisiana State Board of Medical Examiners are urging an amendment to the Medical Practice Act, elevating the standard of midwifery practice in the State.

DR. LONG HONORED.—On March 30, 1912, the University of Pennsylvania memorialized Dr. Crawford Williamson Long by unveiling a bronze medallion in the medical laboratory building of this university. Appropriate addresses and exercises marked the occasion celebrating the man who first made use of ether as an anesthetic for surgical purposes on March 30, 1842.

THE FIFTEENTH INTERNATIONAL CONGRESS ON HYGIENE AND DEMOGRAPHY will meet in Washington, D. C., in the Senate Annex, on September 23 to 28, 1912, under the presidency of Dr. Henry P. Wolcott.

AMERICAN PROCTOLOGIC SOCIETY.—The fourteenth annual meeting of this society takes place at Atlantic City, June 3 and 4, 1912,

at the Hotel Chalfonte. The profession is cordially invited to attend all meetings.

THE INTERNATIONAL CONGRESS ON COMPARATIVE PATHOLOGY will be held in Paris, from October 17 to 23, 1912.

HEREDITY OF HARELIP.—Drs. C. B. Davenport and W. F. Blades, at Cold Spring Harbor, Long Island, New York, are interested in the study of the heredity of harelip, cleft palate and associated malformations of the oral cavity. Correspondence is solicited with physicians who can supply histories of families having more than one member with an oral defect. All data sent will be held confidential, and are to be used solely to aid in the study of a problem of scientific interest and humanitarian value.

GREATER NEW YORK NUMBER.—*The American Journal of Surgery* announces for June a number of original contributions from eminent men in Greater New York, which contributions are to feature the June issue.

MEETING OF THE AMERICAN MEDICAL EDITORS' ASSOCIATION.—The annual meeting of this Association will be held in Atlantic City, on June 1 to 3, at the Marlborough-Blenheim Hotel. Dr. Thomas L. Stedman, of the *New York Medical Record*, will preside, and an attractive program is promised. The annual banquet will be held on the evening of June 3.

PERSONALS.—Dr. Ira Remsen, for eleven years president of Johns Hopkins University, has tendered his resignation to the Board of Trustees. It is said that Dr. Remsen will remain as professor of chemistry.

Dr. L. Lazaro, from St. Landry, has been elected a member of the Senate from the Fourteenth District.

THE JOURNAL offers its deepest sympathy to Dr. O'Reilly for the loss he has recently sustained in the death of his mother.

Dr. K. T. Klein, of Meridian, Miss., was elected house-surgeon of the Matty Hersee Hospital. The hospital will be operated exclusively as a charitable hospital in the future.

Dr. and Mrs. G. Ingersoll Dakin, of Detroit, are visiting the city, and are at 1433 St. Charles avenue.

Drs. E. M. Hummel and Isadore Dyer were guests of the Fifth District Medical Association at San Antonio, Texas, on April 4.

Drs. C. C. Bass, E. D. Fenner and S. G. Wilson read papers at

the Mississippi Medical Association meeting in Jackson, April 9 to 11. Dr. Isadore Dyer delivered the annual oration.

Dr. C. W. Duval attended the annual meeting of the Society of Pathologists and Bacteriologists at Philadelphia, April 6.

Dr. Jos. T. Hume read a paper at the recent meeting of the South Carolina State Society.

Dr. J. B. Guthrie attended the recent meeting of the Alabama State Society.

Dr. Oscar Dowling will deliver a series of illustrated lectures on sanitation and hygiene in the public schools of the city. The parents of the pupils and the public will be welcome to attend the lectures. The list of the schools in which Dr. Dowling will lecture are as follows: Jefferson, Audubon, McDonogh No. 18, Maybin, Beauregard, Gayarre, Henry W. Allen, McDonogh No. 16, St. Philip, McDonogh No. 23, McDonogh High School No. 3, La Salle, McDonogh No. 1, Robert C. Davey, F. T. Howard No. 2, Washington, Jefferson Davis, McDonogh No. 31, Jackson, W. O. Rogers, McDonogh No. 14, McDonogh No. 17.

Dr. G. R. Fox has resigned as hookworm inspector of the Rockefeller Sanitary Commission, under the direction of the Louisiana State Board of Health. He will resume practice at Moreauville, La.

REMOVAL.—Dr. M. S. Picard, from Gonzales, La., to 1040 Robin street, New Orleans.

DIED.—On April 8, 1912, Dr. M. J. Lehman, of this city.

On April 6, 1912, Dr. S. J. Mayeux, of Moreauville, La., aged 28 years.

On April 11, 1912, Dr. Samuel Frey, of this city, aged 41 years.

MARRIED.—On April 11, 1912, Dr. Joseph E. Burleigh, of Grand Coteau, La., to Miss Bessie Trahan, of Lafayette, La.

On April 11, 1912, Dr. J. Clarence Berwick, of Berwick, La., to Miss Bessie Caffery, of Lafayette, La.

On April 18, 1912, Dr. E. D. Friedrichs to Miss Lillian Loeber, both of this city.

Dr. James M. Daniel was married to Miss Marie Clarissa Sandoz on April 15, 1912, at Opelousas, La.

On April 17, 1912, Dr. Charles Noel Chavigny was married in New York City to Miss Lillian Hazel Laing.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of respective publications. The acceptance of a book implies no obligation to review.

Infections of the Hand, by ALLEN B. KANAVEL, M. D. Lea & Febiger, Philadelphia, 1912.

This work is the result of careful study and observation on the part of the author, who is Assistant Professor of Surgery at the Northwestern University Medical School of Chicago.

We assisted, a few years ago, at a very lucid demonstration by Dr. Kanavel of this particular pathology of the hand.

Although surgical intervention is usually required, still the general practitioner is not infrequently confronted with these conditions, especially in the initial stage, when it is essential to recognize the exact pathology so as to institute the proper treatment.

Bone felon, palmar abscess, tenosynovitis and lymphangitis, to mention but these, if taken in time can be successfully combated. We know, however, what irreparable damage, aye, even death, can follow a mismanaged case.

We note with satisfaction that the author cites rest or immobilization as one of the essential factors in the treatment of the above. We heartily substantiate that point, both as an antiphlogistic measure as well as affording, if properly carried out, ease from pain and great comfort to the patient.

LARUE.

Orthopedic Surgery, by EDWARD H. BRADFORD, M. D., and ROBERT W. LOVETT, M. D. William Wood & Co., New York, 1911.

The two qualified and well-known orthopedic surgeons of Boston present this condensed, but none the less useful, book. Their clinical material was abundantly found in the Boston Children's Hospital, which very greatly facilitated and enhanced their work. The views expressed in the volume are mostly individual.

On perusal we are struck with the artistic form of the book, such as the fine paper and print, the many high-grade illustrations and the general presentation of the subject.

We take pleasure in recommending it to the profession.

LARUE.

Operative Surgery, by J. F. BINNIE, A. M., C. M. (Aberdeen). P. Blakiston's Son & Co., Philadelphia, 1911.

This, the fifth edition of Binnie's *Operative Surgery*, is issued for the first time in a single volume.

We, who have had occasion to review some of the preceding editions, do welcome and commend the work in its new form. Binnie not only thoroughly revised and enlarged his manual, but, as a valuable adjunct to the text, he has inserted over a thousand illustrations, some in colors, and taken from the best foreign and American authors.

We lay special stress on the interesting chapters on Arteriotherapy, the Operative Treatment of Fractures, and Joint Transplantation.

LARUE.

Text-Book of Ophthalmology, by DR. ERNEST FUCHS. Translation by DR. ALEXANDER DUANE. Fourth edition. J. B. Lippincott Company, 1911.

The fourth English edition of Dr. Fuchs' great work on Ophthalmology comes to us in most attractive form. The entire matter has been carefully revised, and presents not only the most modern views of others working in this field, but particularly those culled from his ripened experience. Endowed with a keenly observant mind and possessed of a facile and graphic pen, the author has given to the ophthalmological world a one-volume work that is truly a masterpiece.

The two chapters on the General Physiology, Pathology, Symptomatology and Treatment of Eye Diseases as a whole, serving as a beacon light, illuminate the whole subject and bring into admirable correlation the many facts and theories treated therein. We heartily commend it as the best text-book of ophthalmology in our language. E. A. R.

Progressive Medicine. Edited by HOBART AMORY HARE, M. D., assisted by LEIGHTON F. APPLEMAN, M. D. Vol. XIV, No. 4. March 1, 1912. Lea & Febiger, Philadelphia and New York.

This initial number of a new volume of this excellent quarterly is an unusual collection of most interesting reviews. The surgical articles are by Dr. Charles H. Frazier; the article on Infectious Diseases by Dr. John Ruhrah; Diseases of Children by Dr. Floyd Crandall; article on the Nose and Throat by Dr. D. B. Kyle, and on the Ear by Dr. Arthur B. Dull.

The pages on Infectious Diseases are particularly timely, being devoted to meningitis, poliomyelitis, pellagra, etc.; Bass' experimental work on pellagra and chickens is given full space, and all recent advances in the laboratory and clinical work on the subjects are discussed.

The whole volume teems with valuable additions to current literature. DYER.

Home Hygiene and Prevention of Disease, by NORMAN E. DITMAN, M. D. Duffield & Co., New York, 1912.

This is a practical book, with alphabetic arrangement of the topics presented. Each subject is tersely given, with enough definition to make the reader familiar with the matter. No attempt is made to discount either the need or the purpose of the methods and physician, but many drugs are indicated for common household emergencies. DYER.

Microscopy, Bacteriology and Human Parasitology. A manual for Students and Practitioners. Second edition. By P. E. ARCHINARD, A. M., M. D. Lea & Febiger, Philadelphia and New York.

Arranged in chapters, with a list of questions at the conclusion of each, this little book is handy for use as a compend. Its practical character also commends it as a guide in the laboratory for the student and practitioner. The first edition found enough friends to make a second edition desirable, and this, the preface states, has been satisfied by a thorough revision.

The first edition was translated into the Chinese language, because of its superior availability among other texts. The long practical experience of the author lends the personal equation to an otherwise popular book. DYER.

Honan's Handbook to Medical Europe, by JAMES HENRY HONAN, M. D. P. Blakiston's Son & Co., Philadelphia.

To any medical man projecting a sojourn in Europe, this little book will afford complete instruction regarding medical opportunities and facilities. DYER.

Physiology. A Manual for Students and Practitioners, by A. E. GUENTHER, Ph. D., and THEODORE C. GUENTHER, M. D. Second edition. Lea & Febiger, Philadelphia and New York.

The authors disclaim any intention of presenting more than a summary of facts in physiology, arranged for the convenience of students for purposes of reviewing the subject. In this the work is entirely adequate, being in every sense a compend. At the same time the scope of the topics treated is commensurate with the purpose.

DYER.

Publications Received.

J. B. LIPPINCOTT COMPANY, New York and London, 1912.

International Clinics, Vol. I, twenty-second series, 1912.

W. B. SAUNDERS COMPANY, Philadelphia and London, 1912.

Diseases of the Genito-Urinary Organs and Kidneys, by Robert Holmes Greene, A. M., M. D. Third edition, revised and enlarged.

WM. WOOD & CO., New York, 1912.

The Surgery of Deformities of the Face, by John B. Roberts, A. M. M. D.

PHILOPOLIS PRESS, San Francisco, 1912.

Spondylotherapy, by Albert Abrams, A. M., M. D., F. R. M. S. Third edition, enlarged.

BAILLIERE TINDALL & COX, London, 1912.

The Surgical Treatment of Locomotor Ataxia, by L. N. Denslow, M. D.

REBMAN COMPANY, New York, 1912.

The Treatment of Short Sight, by Prof. Dr. J. Hirschberg, translated by G. Lindsay Johnson, M. D., F. R. C. S.

Text-Book of Ophthalmology, by Dr. Paul Roemer, translated by Dr. Matthias Lanckton Foster. Vol. I.

Surgical Operations, by Prof. Friedrich Pels-Lensden, only authorized English translation, by Faxton E. Gardner, M. D.

MISCELLANEOUS:

Public Health Reports, Vol. XXVI, Part II, Nos. 27-52; Vol. XXVII, Nos. 11, 22, 13, 14. (Washington Government Printing Office, 1912.)

Vegetables as a Possible Factor in the Dissemination of Typhoid Fever, R. H. Creel. (Washington Government Printing Office, 1912.)

Typhus Fever in the United States. (Washington Government Printing Office, 1912.)

Report of Department of Sanitation of the Isthmian Canal Commission for the Year 1911; Report of the Department of Sanitation of the Isthmian Canal Commission for the Month of January, 1912. (Washington Government Printing Office, 1912.)

The Friends of the Insane, and Other Essays, Bayard Holmes, M. D. (The Lancet-Clinic Publishing Company, Cincinnati, 1912.)

The Annual Report of the Surgeon-General of the Public Health and Marine Hospital Service of the United States, for the Fiscal Year 1911 (Washington Government Printing Office, 1912.)

Public Health Reports. Volume XXVII, Nos. 6, 7, 8, 9, 10. (Washington Government Printing Office, 1912.)

Report of the Medical Director of the Hot Springs Reservation to the Secretary of the Interior. (Washington Government Printing Office, 1911.)

The Cultivation and Manufacture of Tea in the United States, by George F. Mitchell. (Washington Government Printing Office, 1912.)

Saunders' Complete Catalog. (W. B. Saunders Company, Philadelphia and London.)

The Causation and Prevention of Typhoid Fever, by L. L. Lumsden. (Washington Government Printing Office, 1912.)

The Relation of So-Called Brill's Disease to Typhus Fever, by John F. Anderson and Joseph Goldberger. (Washington Government Printing Office, 1912.)

Epidemic Cerebro-Spinal Menigitis, by W. H. Frost. (Washington Government Printing Office, 1912.)

Report of the Department of Sanitation of the Isthmian Canal Commission for the Month of December, 1911.

Digest of the Comments of the Pharmacopeia of the United States of America (eighth decennial revision) *and on the National Formulary* (third edition), by Murray Galt Motter and Martin I. Wilbert. (Washington Government Printing Office, 1912.)

Quarterly Report of Bureau of Health for the Philippine Islands. (Manila Bureau of Printing, 1911.)

Annual Report of the Library Committee of the College of Physicians of Philadelphia.

Ophthalmic Literature, edited and published by Edward Jackson and Wm. H. Crisp.

Reprints.

A Forecast of the Evolutions and Revolutions in Medical Education, by T. D. Crothers, M. D.

A New Typhoid Fever Test, by Francis A. Prendergast, M. D.

A Study of Arneeth's Nuclear Classification of the Neutrophiles in Healthy Adult Males, and the Influence Thereon of Race, Complexion and Tropical Residence; A Second Contribution to the Etiology of Beriberi; The Effect of Ultra Violet Rays on Amœba, and the Use of These Radiations in the Sterilization of Water; The So-Called X-Bodies as Artefacts in Glass Slides; Lithopedion; The Evolution of the Operating Table, by William Seaman Bainbridge, Sc. D., M. D.

The Working Bulletin System and Board of Control—A Plan for Collecting Evidence Concerning the Newer Materia Medica, by F. E. Stewart, Ph. G., M. D.

A Localized Outbreak of Typhoid Fever Traced to the Milk Infection by a Bacillus-Carrier; Also a Case of Laboratory Typhoid Fever Contracted from the Cultures, by Charles F. Boldman, M. D., and W. Carey Noble, M. D.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans
FOR MARCH, 1912.

CAUSE.	White.	Colored.	Total.
Typhoid Fever.....			
Intermittent Fever (Malarial Cachexia)	1	1	2
Smallpox.....			
Measles			
Scarlet Fever.....	1		1
Whooping Cough.....	1		1
Diphtheria and Croup.....	2		2
Influenza	8	8	16
Cholera Nostras.....	1		1
Pyemia and Septicemia	1		1
Tuberculosis.....	53	36	89
Cancer.....	19	4	23
Rheumatism and Gout	1		1
Diabetes	7	1	8
Alcoholism		1	1
Encephalitis and Meningitis.....	7	11	18
Locomotor Ataxia.....	1		1
Congestion, Hemorrhage and Softening of Brain.....	22	9	31
Paralysis	4	4	8
Convulsions of Infants		3	3
Other Diseases of Infancy	8	4	12
Tetanus.....	1	3	4
Other Nervous Diseases	3	3	6
Heart Diseases.....	68	43	111
Bronchitis	4	3	7
Pneumonia and Broncho-Pneumonia.....	24	34	58
Other Respiratory Diseases.....	4	1	5
Ulcer of Stomach.....			
Other Diseases of the Stomach	2	1	3
Diarrhea, Dysentery and Enteritis.....	11	4	15
Hernia, Intestinal Obstruction.....	4	1	5
Cirrhosis of Liver.....	5	3	8
Other Diseases of the Liver	3	1	4
Simple Peritonitis			
Appendicitis.....	1		1
Bright's Disease	36	22	58
Other Genito-Urinary Diseases.....	5	6	11
Puerperal Diseases	1	3	4
Senile Debility	7	3	10
Suicide	4		4
Injuries.....	22	20	42
All Other Causes.....	25	13	38
TOTAL.....	367	246	613

Still-born Children—White, 18; colored, 20; Total, 38.

Population of City (estimated)—White, 272,000; colored, 101,000.

Total, 373,000.

Death Rate per 1000 per Annum for Month—White, 16.18; colored, 29.22; Total, 19.72.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure.....30.08
Mean temperature.....61.
Total precipitation.....10.81 inches
Prevailing direction of wind, east

New Orleans Medical and Surgical Journal.

VOL. LXIV.

JUNE, 1912.

No. 12

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

Observations on the Effect of Ipecac, Phenol and Salicylic Acid on Amebæ in Vitro.*

By RANDOLPH LYONS, M. D., New Orleans, La.

(From the Laboratory of Clinical Medicine, Medical Department of Tulane University.)

In view of the successful results obtained clinically from the administration of ipecac in amebic dysentery, these experiments were undertaken, at the suggestion of Prof. George Dock, in the hope of finding out, if possible, the manner in which ipecac acts. Owing to the fact that it is customary, in this section of the country, to prescribe ipecac in salol-coated pills, I decided also to investigate the action of this drug. As salol is broken up in the body into phenol and salicylic acid, the action of these two constituents was tested separately upon amebæ.

The salol content of the ordinary 5-grain ipecac pill varies quite considerably. An analysis of such a pill, made for me by the pharmacists of two hospitals and two reliable drug stores showed an amount of salol varying from $2\frac{1}{2}$ to $4\frac{1}{2}$ grains. These were

* Read before the American Society of Tropical Medicine, 1911.

fresh, hand-made pills. Machine-made, 5-grain salol-coated pills, which are prepared by a number of pharmaceutical houses, contain about 2 grains of salol and occasionally less, but the coating is usually so tough that there is always danger of the pill not being absorbed and passing out of the bowel unaffected. An average 5-grain pill, we will say, has a salol content of approximately 3 grains. The dosage of ipecac ranges from 35 to 100 grains or 7 to 20 pills, therefore a patient getting 60 grains of ipecac will obtain 36 grains of salol or even more; not an inconsiderable dose. The largest dose of ipecac that I have seen was prescribed by Dr. Dock, and consisted of 100 grains daily for 3 days.

On this account I deemed it advisable to study the action of phenol and salicylic acid on amebæ.

For the subsequent experiments, cultures of amebæ were employed, as they could be most satisfactorily handled and controlled. Such experiments have been performed upon amebic cultures with numerous antiseptics by Thomas (1), but no tests have been conducted, so far as I am aware, to determine the action of ipecac, phenol or salicylic acid. A few experiments were tried at first upon living amebæ in dysenteric stools, but the results were unsatisfactory, because patients could not be kept without treatment and because the amebæ lost much of their motility in transportation in cold weather from hospital to laboratory.

AMEBIC CULTURES.—Two cultures of amebæ were used for the experiments, one of which was obtained from Dr. Couret, and the other grown from a patient in the ward. Both cultures were isolated from dysenteric stools and grown upon Musgrave & Clegg's special (2) agar medium, in symbiosis with colon bacilli.

PREPARATION OF IPECAC.—Ipecac suspensions were made by mixing powdered ipecac and sterile distilled water in various dilutions. These watery suspensions were frequently shaken and only used after an interval of at least four hours.

EXPERIMENTS, METHOD I.—In the first experiments, the ipecac was incorporated in the special agar medium. One c.c. of varying concentrations of a watery ipecac suspension was added to test tubes containing 9 c.c. of the previously liquified special medium,

(1) "Report on the Action of Various Chemical Substances Upon Cultures of Amebæ." J. B. Thomas, *The American Journal of Medical Science*, January, 1906.

(2) Musgrave & Clegg, Bulletin No. 18, Biological Laboratory of the Government Laboratories, October, 1904.

poured into petri dishes and allowed to harden. The medium contained ipecac in dilutions from 1-1000 to 1-100. Controls were made by adding same quantity of sterile water to the medium instead of ipecac suspension. Forty-eight hour cultures of amebæ were then transplanted with their symbiotics to these ipecac plates, kept at room temperature and examined at intervals of 2, 4 and 6 days.

The amebæ grew moderately well, as compared with the controls, upon all the ipecac plates except in the 1-to-100 concentration—here it was difficult to interpret the result, as the medium was rendered so opaque by the ipecac that the amebæ could scarcely be recognized when present. The results as a whole, after many experiments with this method, were negative.

METHOD II.—It was thought advisable, in the following experiments, to use only one strain of amebæ in order to obtain a greater uniformity of results, and owing to the fact that Dr. Couret's ameba was the hardier of the two, it was selected. In these tests I followed the technic employed by Thomas, with slight modifications. The medium was not altered, but the amebæ were subjected to the action of watery ipecac suspensions. Amebæ were grown on slants of the special medium for 48 hours, and ipecac suspensions of 1-100 to 1-10 strengths added to slants and allowed to remain in contact with the amebæ for 10 minutes to an hour, poured off and surface of slants gently washed with sterile water to remove traces of ipecac and then making transplants from surface to fresh media in petri dishes. Control transplants were made from every amebic slant previous to adding watery suspensions of ipecac. The results of this method showed that ipecac had some influence in inhibiting the growth of the amebæ in 1 to 20 concentration for 20 minutes or over. The symbiotics were but slightly affected.

METHOD III.—Thomas suggested the possibility of many of the amebæ in slant growths being protected by those above them, thus escaping the action of the solution. In the next experiments I followed in general the technic which he employed. From 48-hour slant cultures of amebæ, transplants were made to fresh medium as controls (Control I). Then to each slant was added 4 c.c. of sterile water and the surface of the slant was carefully scraped off into the fluid with a sterile platinum loop. The resultant sus-

pension of amebæ and colon bacilli was poured into sterile test tubes. From each of these tubes 2 c.c. of the amebic suspension were removed and added to an equal amount of sterile water for varying lengths of time as an additional control (Control II). To the remaining 2 c.c. of amebic suspension, 2 c.c. of a watery ipecac suspension were added for periods of 20 to 60 minutes in concentrations of 1-20 to 1-80. After the desired length of time, transfers of 2 loops were made from all tubes (including Control II) to petri dishes and well distributed over special medium. The amebæ were allowed to develop for 2 days, when plates were carefully examined. The table given below represents the results obtained by this method:

Dilution of Watery Ipecac. Suspension.	Ipecac Suspension Applied. Minutes.	Growth of Amebæ After Exposure to Ipecac Suspension.	Growth of Symbiotic Bacteria.	Control I.	Control II.
I-20	30	Very slight	Yes	Fair	Fair
I-40	20	Very slight	Yes	Good	Slight
I-40	40	Very slight	Yes	Good	Slight
I-40	60	Very slight	Yes	Good	Fair
I-80	40	Very slight	Yes	Good	Fair
I-80	60	Slight	Yes	Good	Fair

In doubly controlling these experiments a fairer idea was obtained of the relative growths of amebæ treated and untreated with ipecac. In Control I, where the amebæ were transferred directly from the 48-hour slant cultures to the plates, practically all showed good growths. In Control II, however, the amebæ were in the same dilution as those treated with the ipecac suspension and consequently the growths are less than in Control I, though somewhat greater in each instance, when compared to the amebæ exposed to the action of the ipecac. Thomas, in his tests, only made use of Control I. From this table and other experiments along this line, I was able to note but a very slight inhibitive action of the ipecac upon the amebæ. The symbiotics were apparently unaffected.

METHOD IV.—Stool Extracts: In order to determine, if possible, whether the apparent good effect of ipecac in amebic dysentery was due to the fact that the drug underwent some change in the body, which increased its deleterious action upon the amebæ, the following experiments were undertaken:

Stools were collected from patients receiving ipecac, in which no amebæ had been found for at least two or three days, filtered and the filtrate auto-claved. The sterile fecal filtrates were utilized instead of watery ipecac suspensions according to the last two methods described. The filtrates were not diluted and were allowed to remain in contact with the amebæ from 10 to 60 minutes. The results of these experiments showed a very slight diminution in the growth of the amebæ which had been treated with the filtrate for 50 to 60 minutes as compared with the controls.

EXPERIMENTS WITH PHENOL.—Phenol may be dismissed with a few words. The same general technic was employed as with ipecac. The drug had no perceptible effect upon the amebæ in dilutions above 1 to 500. Under this point, the deleterious action was apparently due, chiefly, to the destruction of the symbiotic bacteria. As the amount of phenol derived from salol, when broken up in the body, is only about 36%, it will be clearly evident that this drug can exert no appreciable affect on amebæ in the body.

EXPERIMENTS WITH SALICYLIC ACID.—In these experiments, methods II and III were employed. The following table gives the results with method II:

Solution.	Dilution.	Solution Ap. plied. Minutes.	Growth of Amebæ after Exposure.	Growth of Symbiotic.	Growth of Controls.
Salicylic acid	1-2500	15	Slight	Good	Good
Salicylic acid	1-2500	30	No	Fair	Good
Salicylic acid	1-2500	45	Very slight	Fair	Good
Salicylic acid	1-2500	60	No	Slight	Fair
Salicylic acid	1-5000	30	No	Fair	Good
Salicylic acid	1-5000	60	No	Slight	Fair
Sterile water	.....	60	Fair	Good	Fair

This table shows that salicylic acid has a marked destructive action on amebæ in dilutions up to 1-5000. Further tests performed with this same technic demonstrated that salicylic acid in 1-to-10,000 dilution possessed no destructive properties on amebæ but merely a slight inhibitive action. In the last row of the above table (II), sterile water was used as an additional check.

The results of method III with salicylic acid are illustrated by table III:

Solution.	Dilution.	Solution Applied. Minutes.	Growth of Amebæ after Exposure.	Growth of Symbiotics.	Growth of Control I.	Growth of Control
Salicylic acid	1-5000	10	Slight	Slight	Good	Good
Salicylic acid	1-5000	20	Very slight	Slight	Good	Fair
Salicylic acid	1-5000	30	No	No	Good	Good
Salicylic acid	1-5000	40	No	No	Good	Fair
Salicylic acid	1-5000	50	No	No	Good	Good
Salicylic acid	1-5000	60	No	No	Fair	Fair
Salicylic acid	1-10,000	60	Very slight	Slight	Good	Fair
Salicylic acid	1-10,000	60	Slight	Slight	Good	Good

Table III shows even more strikingly the effect of salicylic acid upon the amebæ in 1-to-5000 dilution. The fact must not be overlooked that in method II, as Thomas has pointed out, the amebæ and colon bacilli are piled one upon the other so that those on the bottom are, to a certain extent, protected from the action of the medicinal agent by those above and may escape destruction. This difference in the two methods is well shown by comparing the growths of the symbiotic bacteria. They are greatly inhibited in table III while but slightly in table II.

Dilutions of 1-10,000 by this method (III) also demonstrated some inhibitive but no destructive effect in 60 minutes.

SUMMARY OF RESULTS AND EXPERIMENTS.—1. The experiments with ipecac on amebæ in vitro fail, thus far, to explain its clinical value in the treatment of amebic dysentery.

In a few experiments ipecac apparently possessed slight inhibitive power on the amebæ, but the results were not sufficiently marked to warrant any definite conclusion.

2. It is possible that the action of the ipecac is dependant upon some specific change which it undergoes after ingestion into the body. On the other hand, it is highly probable that the amebæ grown upon artificial media are not the *Entameba histolytica* and may therefore be more resistant to the action of the ipecac.

3. The experiments with phenol show that it has no effect upon amebæ except in comparatively strong solutions. Its action is chiefly upon the symbiotic bacteria. From a clinical point of view the action of phenol is unimportant.

4. The experiments with salicylic acid revealed a marked destructive action upon amebæ in dilutions up to 1-5000. Above

this point some slight inhibitive effect on their growth was demonstrated in dilutions as high as 1-10,000. It is also strongly bactericidal.

5. This marked effect of salicylic acid on amebæ is an additional reason for the administration of ipecac in salol-coated pills in preference to other coatings (e. g., keratin) or methods, as it is well known that salol is broken up into its two constituents in the intestinal tract, yielding about 64% of salicylic acid.

6. I would suggest also the use of salicylic acid as an irrigating fluid, in amebic dysentery, in watery solutions of 1-to-4000 to 1-to-1000 strength.

NOTE.—Since this paper was read my attention was directed to an article by Dr. E. B. Vedder in the *Bulletin of the Manila Medical Society*, March, 1911, entitled "A Preliminary Account of Some Experiments Undertaken to Test the Efficiency of the Ipecac Treatment of Dysentery." In this article Dr. Vedder concludes that ipecac is a powerful amebicide, and that this property is probably dependent upon its emetin content, which differs widely in various specimens. Unfortunately in my experiments, the ipecac was not previously assayed. One specimen of the ipecac which remained was examined and found to contain only one-fifth of the total alkaloids required by the U. S. P. In view of these facts, the conclusions expressed in regard to ipecac must be withheld until the experiments can be repeated with an assayed product of ipecac.

Rush Section Diagnosis as an Aid to the Surgeon.*

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(From the Laboratory of the Presbyterian Hospital, New Orleans.)

The advent of procuring sections of tissues by the freezing method has furnished a means for rapid diagnosis in surgical pathology the benefits of which have received very liberal discussion. With this method it is possible for the pathologist in many instances to procure within a period of from three to ten minutes an absolute diagnosis of the offending factor. Its application to tumor masses or suspected tumors, wherein it has its chief indication, is capable of revealing their true identity and true prognostic

* Read before the Orleans Parish Medical Society, January 22, 1912.

features and thereby governing the surgeon in his method of procedure for the operation.

In the consideration of such a subject, it is necessary that it be discussed from many aspects, hence it is necessary that some details be indulged in.

Its indications:

1. Tumors of the external parts including chiefly tumors of the breast, tumor masses of the lymphatic glands, e. g., cervical, axillary and inguinal; tumors of the parotid gland, of the penis, and testes; of the head, trunk, and extremities, especially those connected with the periosteum, i. e., suspected sarcomata. In these latter of the periosteum, i. e., suspected sarcomata, knowledge of their tissue units is of considerable importance where conservatism of the member means so much. These tumors, from their gross appearance sarcomatous, whilst microscopically at times of the small or large round-celled or oat or small spindle-celled type, are often giant-celled sarcomas having a more or less fibro-sarcomatous or fibroma-molle basis. Such giant-celled sarcomata when shelled in toto from their peripheral tissues, which is quite practical, do not recur and this procedure has avoided thereby the very radical measures which are of such moment in these cases.

Sections of surface epitheliomata by their histopathological arrangement and evidences of activity of mitosis or cell division will reveal their degree of malignancy and govern the extent of the operation, i. e., whether the growth is a Krompecher baso-cellulare or the more malignant spino-cellulare.

In breast tumors, particularly incipient ones, rush sections are strikingly of service. Here, with the very small tumor nodule totally excised, the rush diagnosis is an almost positive criterion of the nature of the tumor and therein governs the questions of entire breast and adjacent lymph nodes' removal, i. e., a Halstead operation or simply the removal of the tumor nodule with a complete marginal circumferential zone of uninvolved tissue. This latter should, I think, be emphasized, as attempted conservatism to the extent of simply shelling out the tumor may prove not conservatism by permitting small tumor bits to remain in the area. These have powers of multiplication or even potentiality of malignancy, leading thereby to recurrence and even worse consequences.

The tumors of the parotid gland, recognized as mixed tumors, are, *per se*, not malignant, not metastasizing, hence do not recur if entirely removed. A rapid diagnosis on such a tumor relieves the surgeon from a devastating operation extending even to removal of part of the inferior maxilla where he fears its involvement in the sarcomatous growth. Again, true sarcoma of this region, corroborated as such, assures and urges him through such difficulties.

2. Tumors internal but readily accessible, e. g., of the vagina, cervix, and cavity uteri, rectum and bladder, of the tongue, nasopharynx and larynx.

Whilst advanced malignancy of cervix can with even the history and odor alone be diagnosed, incipient carcinomata present at times doubtful diagnostic features justifying microscopical confirmation whilst at the table.

Here, again, the slow-growing basal-celled tumor of the cervix must be kept in mind, for, whilst simulating in gross at times the very malignant carcinoma, its histo-pathological picture stamps its true character. However, as in this instance the safest treatment is usually the same as if it were the most malignant of tumors, the rush section serves practically no other purpose than for affirmation or negation of the diagnosis of incipient carcinoma. This, after all, is the most important instance in which it could be desired.

Malignant leiomyomata are rare and are very difficult of detection with rush sections even in very expert hands.

Uterine tumors of the lining of the cavity, i. e., the fundus and the sides:

Uterine scrapings of small bits of mucosa, usually soaked with blood or mucus, are quite tedious to handle and often of no avail for rush sections. Where the tumor has grown to a reasonable extent the masses scraped are usually quite large and sufficiently firm to permit of good sections. Whilst the diagnosis of carcinoma can be thus readily made, a marked hyperplastic endometritis, with its exaggerated gland picture, is with difficulty differentiated from adenomata of this region. Fixed tissue sections of such tumors, or even the truly malignant adenomas, are, at times, difficult to distinguish from marked hyperplastic endometritis.

Chorio-epitheliomata, syncytioma malignum or deciduoma malignum:

Scrapings or bits of such neoplasms present a microscopical picture akin to pregnancy, i. e., syncytial buds, decidual cells, even chorionic villi. This resemblance is often so striking that it is only after the diagnosis is decided upon clinically and the uterus removed, that the mural invasion due to the lytic properties of this unique growth identifies it as such. Unfortunately this is often after metastasis has occurred and the condition thereby hopeless.

In the rush section diagnosis of tumors of the rectum the consideration of one particular tumor must be referred to namely the adenoma or adeno-carcinoma. Such a report may have paradoxical meanings: malignancy or benignancy. This very important discrepancy is not in the tumor *per se*, but in its developmental relationship. If the tumor growth is towards the lumen, which is fortunately frequently the case because of the locus minor resistentia, it represents usually naught more than a polyp. If, however, its direction of growth is towards the periphery of the gut with invasion through the stroma and sub-mucosa, it is sessile extending through the wall and acts malignantly. These remarks apply also to similar tumors of the bladder.

In abdominal tumors or masses, whilst at times it serves for differentiating tumor types, e. g., hypernephromata or true Grawitz tumor and other renal tumors, tumors and potentially malignant cysts of ovary (cystadenoma papilliferum), primary or metastatic tumors of the omentum and tuberculosis, malignancy of the stomach and cicatricial masses from ulcers which, however, may be considered potentially malignant. Such rush sections rarely govern the operative procedures and could be diagnosed with less strenuousness after the operation with fixed tissues. In these instances it is merely an adjunct for the surgeon but rarely an indication of much worth for the patient.

It has been my good fortune to have had within the last few years nearly a hundred rush section diagnoses, a great number of these occurring during the past year at the Presbyterian Hospital. Amongst these, tumors of the breast were the most numerous; next in number, were those of the uterus and abdominal cavity, others were of the parotid gland, lymphatic glands and larynx.

Of these only a few of the most interesting and at the same time

bearing upon important details of the rush section will be noted:

CASE I.—White female, age 30, with enlarged lymphatic glands along the sterno-mastoid muscle. The infiltration of adjacent structures found upon incision and the absence of macroscopic evidences of tuberculosis occasioned the surgeon to fear tumor of the glands with involvement of surrounding parts. A rush section was requested and showed tuberculosis.

CASE II.—Tumor of the omentum, with primary focus in the right iliac region. The question of tuberculosis or tumor arose bearing in part upon the course of operation. A piece of fatty tissue about 3x4x5 cms. was given for rapid diagnosis. Careful search and one or two sections failed to reveal any evidences of tumor, although the surgeon was positive of a pathological process being present. This tissue was returned to the operating room and another piece was given which showed distinct malignancy. The careful selection of the proper unit for section is well shown in such an instance, meaning often the difference of a positive and a negative report.

CASE III.—White male, age about 40 years. Tumor mass size of orange, just below angle of jaw. It had been present for about a month and then grew larger very rapidly. Under local anesthesia a section was taken from surface about 1 cm. in depth. Careful examination showed chiefly polymorphonuclear cells, fibrin and necrotic areas with a few doubtful cells here and there. Staphylococcus aureus was obtained upon culture. Continued growth and other clinical evidences caused the surgeon to feel justified in a radical operation. The entire mass when removed showed an area of inflammation extending from the surface about 7.5 cm. deep. At the bottom of this mass after careful serial sectioning the small tumor nodule was found which proved to be a malignant lymphoma. The tumor later recurred and the patient died.

This case is noted here not that it was a rush section, but as indicative of another manner in which a tissue unit is sometimes not a criterion to the tumor: i. e., a superimposed acute inflammation or an infected tumor.

CASE IV.—White male, age 50 years, with laryngeal findings sufficient to indicate exploration and operation accordingly, came to the table and request for rush section made. This showed a clear-cut epithelioma and a very radical operation was at once re-

sorted to. A bit of tissue removed whilst dressing wound later, showed upon section distinct tuberculosis. Examination of larger mass later removed showed distinct tuberculosis. Such coincident pathology is indeed rare and hence case is quoted in part for its interest but in greater part to show even the possibility of two distinct diagnoses not only in the same patient but also the same site.

The number of cases wherein it has been of service is quite large and present no sufficient reason for description. I have chosen rather those cases wherein points of importance to the surgeon in the use of rush section are plainly shown.

METHOD OF PROCEDURE.—In all instances, where practical, the pathologist should be notified in due time of the expected operation, that every minute detail may be arranged to avoid the slightest delay. It is advisable that he know the clinical history and even make a clinical examination of the case. It is well that he be present at the beginning of the operation to see all gross evidences upon primary incision and also know of any additional findings whilst patient is under the anesthetic. The surgeon should be very careful in the selection of a section, as in handling the mass he is best able to judge of the unit to serve as a criterion to the tumor's identity. The freezing microtome and the few accessories needed should be as close to the operating room as possible and the pathologist should be absolutely undisturbed during the procedure. Where a technician is available, he is of great service.

TECHNIC.—Details at such a meeting seem out of order and I will suffice with saying that we use as a routine a partial embedding of thin celloidin with a modified eosine-hæmatoxylin method of staining. Whilst not quite as rapid as plain methylene blue, the differentiation is better and hence the method often becomes quicker by avoiding repeated staining and even sectioning.

CONCLUSIONS.—Whilst in the majority of instances the skilled surgeon has made a correct diagnosis from the clinical signs alone or has a probable diagnosis confirmed by his gross findings upon sectioning, there are some in which the microscopic diagnosis is his guiding factor. It must be remembered that such diagnoses are not especially aimed at conservatism in extent of operation, but are directed equally as much towards radicalism. To illustrate this fact we find instances in which the tumor is regarded as benign, but for corroboration the pathologist is requested for a rapid

section and the tumor found malignant. Its important service in this instance is most readily appreciated. If it is found benign, reassurance is given to the surgeon and those much concerned during such times. Where a diagnosis of malignancy is made and confirmed by the microscope during the operation the extreme extent of extirpation is aimed at fearlessly, restricted only by surgical dangers. Should in this last instance, as it does rarely occur, the report be negative, it seems the surgeon's duty to act upon his own diagnosis. This, of course, implies experience on the part of the operator in such diagnoses. If after removing detailed sectioning proves it malignant, the discrepancy at the time of operation was no fault of the pathologist in that the unit of tissue given him was what he reported, but formed no index to tumor's complete character. Should it be found benign the surgeon has acted to the best of his judgment and ability (*Errare humanum est*).

Thus it is seen that viewed from four standpoints it forms a valuable guide in two, a governor in one and a consideration in the last. Such results must be of value.

In fine, it must be remembered that the rush is in procuring the section and not in the diagnosis, i. e., it is a rush section, not a rush diagnosis. Once a properly stained section is obtained, the diagnosis is often, *prima facie*, simple and absolute. Positive diagnoses are absolute, negative reports place the responsibility upon the surgeon.

The New Orleans School of Tropical Medicine and Hygiene.*

By CREIGHTON WELLMAN, M. D., New Orleans, La.,

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(Studies from the Laboratory of Tropical Medicine and Hygiene, Under the Direction of Creighton Wellman, Medical Department, Tulane University of Louisiana.—No. 1.)

In the words of one of the greatest living authorities in the realm of statistics, "every fifty seconds a life is lost from preventable disease."

This means that, if present conditions continue to obtain, over six million lives will be needlessly destroyed in the United States during the next ten years. Prof. Irving Fisher, of Yale Univer-

* Read before the Orleans Parish Medical Society, March 11, 1912. This paper was also delivered as an Inaugural Address before the Faculty and Students of the Medical Department of Tulane University at the opening of the 1911-1912 Session, and repeated in part by request before the New Orleans Forum.

sity, has estimated, on the most conservative basis, that the knowledge which we already possess, if properly applied, "can add fifteen years to the present average length of human life." Contemplating this from purely a mercenary standpoint, that is, saying nothing of the suffering and sorrow involved, and regarding each life lost as worth only the amount earned by the average day laborer, in other words, appraising "each life lost at only \$1,700, and each man's average earnings for the year at only \$700, the economic gain to be obtained from preventing postponable diseases, measured in dollars, exceeds one and one-half billions annually."

It has been conservatively estimated that typhoid fever costs the nation \$350,000,000 annually (Kober).

Malaria costs us \$100,000,000 each year from deaths, loss of labor, reduced values in real estate and in other ways (Howard).

It has been estimated that the yellow fever epidemic of 1873 alone invaded 132 towns, caused a mortality of 15,954 persons and that the pecuniary loss to the country was not less than \$100,000,000 in gold (Wyman).

It is yet too early to secure accurate figures regarding the ravages of hookworm, but it has been estimated that "it costs South Carolina (alone) not less than \$30,000,000 per year" (Weston).

Fisher, after studying these appalling figures, concludes that "one-half a billion yearly could be *saved* from the present cost of illness." And it is cheering to reflect on some of the advances already made.

Cholera was wont to visit the cities of the Atlantic Coast in the past about every ten years, and it was a standing menace to the world every summer. It was not uncommon for the disease to decimate whole towns and cities (Ditman). To-day the disease is unknown in our country.

It has been said that the discovery that the mosquito is the carrying agent for yellow fever "is saving more lives annually than were lost in the Cuban war, and that it is saving the commercial interests of the world a greater financial loss each year than the cost of the entire Cuban war" (Leonard Wood).

The death rate is twice as high in India as in Europe. During my own lifetime the death rate has fallen in Berlin from 33 to 15 per 1,000, and in Washington from 28 to 19 per 1,000, and these differences are largely the triumphs of preventive medicine.

Little wonder that the universities, the states and the nation are waking to the enormous and needless waste of vitality and wealth still going on all about us, and that farsighted men are planning and giving for the purpose of preventing avoidable suffering and death. Little wonder that a distinguished physician has said "the highest aim of scientific medicine to-day is the eradication of preventable diseases" (Kober), and a great scientist has written that "preventive medicine is the watchword of the hour" (Rosenau).

Metchnikoff, than whom no greater exponent of these ideas is living, has said "to hygiene belongs without doubt the place of honor in modern medicine. It is in the prevention of infectious diseases that the interest of the medical art is now mainly centered," and in the recent report of the Carnegie Foundation for the advancement of teaching, Flexner writes: "The laboratory sciences all culminate and come together in the hygienic laboratory out of which emerges the young physician equipped with sound views as to the nature, causation, spread, prevention and cure of disease, and with an exalted conception of his own duty to promote social conditions that conduce to social well being." In his report on national vitality Fisher has well said that "the curricula of medical schools should be rearranged with greater emphasis on the training of health officers. Universities and research institutions need to take up the study of hygiene in all its branches."

Thus we see that the trend of scientific opinion and endeavor has set strongly toward the realization of Pasteur's noble dream that "it is within the power of man to rid himself of every parasitic disease," and one of the most cogent factors in the movement is, as it should be, a financial one, for, as Emerson said, "Health is the first wealth."

I mention these mighty opinions of great men that you may more fully realize what I am sure you have never doubted: that Tulane University, New Orleans and the South have made no mistake in the movement which we are discussing to-day.

In the South the great handicap of disease has been felt the most painfully because, in addition to all the sickness rife in the North, we have various tropical and subtropical scourges which add to the already too heavy burdens which have been laid upon a long-suffering humanity. And it is in the South that some of the greatest

triumphs of preventive medicine and the knowledge of tropical disease have been obtained.

It is, therefore, peculiarly fitting that a great movement for the study and conquest of disease, and particularly tropical disease, should originate in the South, and it was inevitable that New Orleans, the great port of the South, should be its location, and Tulane, the great University of the South, its sponsor.

The time was ripe for the movement and, as I shall show later, it has been everywhere agreed that our city and our university are the heirs of the future and the logical center of tropical medicine and sanitation in the Western Hemisphere. Sectional and institutional jealousies have been put aside in a most remarkable manner, and it is the unanimous opinion of the many distinguished scientists and educators who have been consulted regarding the project that New Orleans and Tulane are marked for a great and manifest destiny in the great work of educating the Western Hemisphere in the vital questions of ridding ourselves of the disease scourges which have too long hindered the commercial, social and moral growth of the many who look to us for guidance and help.

The venture upon which we have embarked is no novel idea, as you are aware. The Dean of the Undergraduate Medical Department of Tulane University has had the project under constant consideration for several years, as I personally know. In an address on Founder's Day, March 3, 1910, Dr. Dyer said:

"New Orleans is the logical point at which to study all the products of exotic types, including disease, and Tulane is the logical field for the investigation. Tulane should have a school of hygiene and sanitation. To such a school the future custodians of health in the South should come to be trained in methods of health, of food supply, of disease, and the means of its prevention. Tulane should be the selected site for the study of tropical diseases, and there should be a school of tropical medicine here under the ægis of Tulane. There is no other place for such a school on the North American Continent! The diseases come to our hospitals, to our port, and to our profession, which should be trained to know them. To-day Liverpool and London, with some of the large cities in the continental colonies of Great Britain, have such schools; in Manila the United States Government conducts such a school; and in each there is a great success. In the hurry of modern civilization a stray utterance in a public address may not linger long in the minds of those who hear or read, but there are many men and women in the South who might help to train physicians right. Tulane, in its Medical Department, has always been honored, and not burdened. The medical alumni have spread to every quarter of the globe."

I believe that many others, both at Tulane and in other parts of

the United States and also abroad, have been looking to New Orleans and the South for initiative in this work. Special mention must be made of Dr. Isaac W. Brewer, of the United States Army, who in May, 1907, published an article pointing out the great advantages of New Orleans as a center of education in tropical medicine for this country.*

Others have recognized the logic of the situation. After criticising various scattering and abortive attempts which have been made to establish schools or chairs of sanitation and of tropical medicine in impossible places—a chair of tropical diseases in some seaport town of Indiana, or courses in industrial diseases for students who will practice in the corn belts of Kansas and Nebraska—the Report to the Carnegie Foundation already quoted says: "We cannot ignore the patent fact that students tend to study medicine in their own states, certainly in their own sections. In general, therefore, arrangements ought to be made, as far as conditions heretofore mentioned permit, to provide the requisite facilities within each of the characteristic groups. There is the added advantage that local conditions are thus heeded and that the general profession is at a variety of points penetrated by educative influences. *New Orleans, for example, would cultivate tropical medicine.*"

This opinion, important as it is, is by no means singular. With your permission I will quote from some of the many letters received by the University:

Dr. J. W. Ames, University of Colorado:

"New Orleans is the logical center for such intensive work, and Tulane's reputation gives sufficient assurance of its success."

Dr. James M. Anders, Philadelphia, former President of the American Society of Tropical Medicine:

"It is with much pleasure and satisfaction that I learned your intention of organizing a School of Tropical Medicine and Sanitation in New Orleans. I have long since been fully convinced that such a school, conducted on broad, progressive lines, was greatly needed in this country, in order to meet professional requirements, more especially in view of the growing interest in the study of tropical diseases, and the increasing number of physicians who are entering upon the practice of medicine in our tropical possessions. Your project is to be highly commended."

Dr. Bailey K. Ashford, U. S. A., Porto Rico:

"Perhaps we must wait awhile and let the great and powerful City of New Orleans take the first and basic step; but there are many of us here

* *Vide* NEW ORLEANS MEDICAL AND SURGICAL JOURNAL for 1907, Vol. LX, p. 763.

who hope, with as yet no formulated plan, that a center of tropical medicine be founded in Porto Rico. My small voice, therefore, is lifted in support of the proposed School of Tropical Medicine in Louisiana."

Dr. Lewellys F. Barker, Johns Hopkins University:

"The country is to be congratulated that the Medical Department of Tulane University has decided to start a School of Tropical Medicine in New Orleans. There is urgent need for just such a school in America, and there could be no better location for it than in your city and under the auspices of your university."

Prof. F. E. Blaisdell, Medical Department Leland-Stanford University, San Francisco, California:

"I most heartily congratulate you upon the beginning organization of the New American School of Tropical Medicine. I consider the field one of great possibilities. The work that is to be taken up by your school is in its infancy. The benefits thus far achieved for mankind from a study of the relations which the lower organisms bear to man are but a hint as to what may be done."

Professor R. Blanchard, Ecole de Médecine, Paris:

"Sur l'opportunité de la création d'une Ecole de Médecine à l'Université Tulane, il m'est très agréable de vous exprimer mes plus chaleureuses félicitations pour la création projetée, et tous mes vœux pour son succès. La Louisiane se trouve aux confins de la zone tropicale; elle est, assurément, de tous les Etats de l'Union, le plus qualifié pour prendre une telle initiative. Je suis sûr que sous votre active et habile direction, l'Ecole nouvelle ne peut manquer de prospérer et de faire œuvre utile, tant au point de vue de l'enseignement, qu'à celui de la découverte scientifique."

Dr. Rupert Blue, Surgeon-General, United States Public Health and Marine Hospital Service:

"I am heartily in favor of establishing a School of Tropical Medicine in this country, and believe that New Orleans is the logical point for the location of such a school."

Dr. W. C. Braisted, U. S. N., Acting Chief of the Bureau of Medicine and surgery:

"New Orleans is a peculiarly appropriate place for the establishment of such a school, and the standing of the Medical Department of Tulane University is a guarantee that its newly-established School of Tropical Medicine will not fail to fill a long-felt want."

Dr. Anton Breinl, Director of the Australian Institute of Tropical Medicine:

"I have learned with great pleasure that you are organizing in New Orleans, in connection with the Tulane University, an American School of Tropical Medicine. I am perfectly convinced that an institution like this is absolutely necessary for tropical parts of the United States, and if the school is taken up along broad, scientific and practical hygiene lines, it will do no end of good for New Orleans and surroundings. I must confess that I have been rather surprised that an institute of this sort had not been started yet in New Orleans."

Dr. A. Calmette, Pasteur Institute, Lille France:

"Les hommes de science de tous les pays apprendront avec grande satisfaction la réalisation prochaine de votre projet d'institution d'une école de médecine et d'hygiène tropicales à la Tulane University de la

Nouvelle-Orléans. Votre Université est merveilleusement placée pour organiser cet enseignement dans les conditions les plus parfaites de telle sorte qu'il puisse non seulement remplir pour le continent Américain la même fonction éducatrice que remplissent en Europe les grandes écoles de Liverpool, de Hambourg, de Londres et de Paris, mais encore attirer de tous les pays vers vous les jeunes médecins Européens désireux de connaître et d'étudier la pathologie tropicale et subtropicale de l'Amérique."

Dr. Solomon Solis Cohen, Philadelphia :

"New Orleans seems to be admirably situated for such an institution, the necessity for which is so obvious that argument in its favor would seem superfluous. I should be very glad to know that you had succeeded in carrying out a project which promises so much benefit, not only to medical science, but to commerce, and, indeed, to all human relations."

Dr. C. W. Daniels, Superintendent London School of Tropical Medicine :

"The need for such an American school is well known to us, as so large a number of Americans have come to our school in London, and though we shall be sorry to miss any of them, we quite realize that they can only represent a small section of those who could and should attend some good course, and to come to England for the purpose is expensive, both in time and money, and with your chances in New Orleans I have no doubt of the success of your venture."

Dr. Ralph T. Edwards, Late Director Government Serum Laboratories, Siam :

"New Orleans is, to my mind, the place for such a school in America. I certainly hope there will be no lack of moral and financial support of the movement."

Mr. Abraham Flexner, Carnegie Foundation :

"I believe this effort is distinctly in the interest of science and humanity."

Dr. Gedoelst, School of Colonial (Tropical) Medicine, Brussels :

"J'ai été fort heureux d'apprendre qu'il était question d'organiser une école de Médecine Tropicale, annexée à l'Université Tulane à New Orleans. La création d'une semblable école s'imposait aux Etats-Unis après les merveilleux développements que les études de Médecine Tropicale ont pris dans les pays les plus divers. Si l'on songe aux travaux remarquables qui ont vu le jour dans les Laboratoires de Manille, de Manguinhos, de São Paulo, pour ne parler que de ceux qui vous touchent le plus près, on peut prévoir que l'école de New Orleans deviendra rapidement un nouveau centre de progrès pour la Médecine Tropicale. La sphère d'action s'étendra tout naturellement par toute l'Amérique Centrale, qui lui réserve une moisson abondante. Je ne puis que vous encourager le plus vivement à poursuivre la réalisation de vos projets, et formuler mes meilleurs vœux pour leur réussite."

Col. W. C. Gorgas, U. S. A., Commissioner and Chief Sanitary Officer Canal Zone, Panama :

"There is no doubt in my mind that New Orleans is the proper point for the establishment of a School of Tropical Medicine, and it would be greatly to the advantage of such a school to be organized as a department of the already firmly established Medical Department of Tulane."

Dr. Ramon Guiteras, New York City:

"If there is any city in this country where, from its geographical position, such a school should be founded, it is in your city, and I expect to see it the center for the study of tropical medicine on this side of the ocean."

Dr. Maximilian Herzog, Late Pathologist to the Bureau of Science, Manila:

"There can be no doubt as to the desirability, nay, even the necessity, of establishing such a school in our country. Our own tropical and sub-tropical possessions bring us constantly, directly or indirectly, in contact with tropical diseases, and our medical men should have the opportunity to be properly prepared to handle such cases, as well as questions of tropical hygiene. I am heartily in sympathy with the project which you have under consideration at this time."

Dr. Walther Horn, Berlin:

"That the need and usefulness of a great department of Preventive Medicine and a school of Tropical Medicine in the United States of America nobody can have a differing meaning. Such institutions are everywhere more than necessary, and especially welcome in your country, where the people of your country really understand their own advantage. They have to take the greatest interest in your work. A good deal of the future of all tropical countries is now in the hands of your and similar institutions."

Dr. L. O. Howard, Chief of Bureau of Entomology, Washington, D. C.:

"It seems to me that New Orleans would be a desirable place to establish such a school, perhaps the best in the whole of the United States, and that such a school is needed there can be no doubt."

Dr. A. Jacobi, President-Elect American Medical Association:

"I have read and studied your printed project of the New Orleans School of Tropical Medicine and Hygiene. Its reasoning is wise and practical, and cannot be improved upon. The question of how our social, financial and political interest in tropical regions, and their welfare and diseases was rapidly developed, does not come up. But it has always been the object and purpose of medical men to so prevent or to cure the direful results of the sins of men and peoples. This is only one of the reasons why all should warmly approve of your project. *If the American people would award you for a thousand millions it has spent on conquests, a single one for the endowment and foundation of your school, both would be served.* The actual advantage both the commonwealth and the individual will derive from its existence is invaluable. Fortunately, the democratic spirit of the American citizen has rarely been found wanting in the support of what his intelligence deemed both laudable and profitable."

Prof. E. Jeanselme, Ecole de Médecine de Paris. (Prof. Jeanselme sent a complete article on the subject, which is being published in another place.)

Prof. Vernon L. Kellogg, Leland-Stanford, Jr., University, California:

"The enormous importance of increasing the scientific knowledge of preventive medicine and tropical disease is a matter that every one cognizant of the situation recognizes. The great interests of both business and humanity demand American aid and endeavor in increasing this knowledge. We have been peculiarly backward, in comparison with other nations, in recognizing our duties and opportunities in the scientific study

of tropical and Oriental diseases. I wish you the largest measure of success in your laudable present endeavor, and I shall be glad to have you call on me for whatever aid I can give in connection with your campaign."

Prof. S. Kitasato, M. D., Imperial Institute for the Study of Infectious Diseases, Tokyo, Japan:

"Your project of establishing a new School of Tropical Medicine and Hygiene has been received. We cannot appreciate too much this kind of project, and especially the school of tropical medicine and hygiene, in which we find a vast tract of unknown land where explorers are wanted. If such a new field be opened to human welfare in America, all the world will enjoy the benefit alike, and the result will be universal."

Dr. E. Liceaga, President Superior Health Board, City of Mexico:

"Todos los esfuerzos que se hagan para organizar establecimientos en que se estudien las enfermedades tropicales y endonde se hagan investigaciones originales, deben ser alentados y por consiguiente yo le doy todo mi apoyo moral (supuesto que tiene Ud. la bondad de pedírmelo)—para que se funde, formando parte del Departamento Medico de la Universidad de Tulane, la Escuela de Medicina Tropical destinada a este objeto."

Dr. George C. Low, editor *Journal of Tropical Medicine and Hygiene*, London:

"I am very glad indeed to hear that the Tulane University has decided to start an American School of Tropical Medicine. Such an institution is required in America quite as much as in England, France, Germany and other countries. There is an abundant wealth of tropical material in the Southern States and in your tropical dependencies, and, possessing such, it would be a pity not to make use of it. I am quite convinced of the necessity of an institution of the kind, and think you could not do better than establish it in the State of Louisiana. The good work America has done in the field of tropical medicine is well known, and with the establishment of a definite school where students and young practitioners can be suitably trained before proceeding abroad, there is no doubt that they will do even more in the future. I have not the slightest doubt that your fellow-countrymen will soon raise the necessary funds to properly endow your new school. It will be a good investment and will bear a valuable interest in the years to come. I wish you the greatest success in your new venture."

Prof. E. P. Lyon, Professor of Physiology and Dean St. Louis University:

"I learn that an effort is being made to organize, on a broad basis and with a large endowment, an American School of Tropical Medicine connected with Tulane University of Louisiana. I wish to state that, in my opinion, this is one of the most promising movements in medical education within recent years. I believe that New Orleans is the proper location for such a school, and that, great as has been the need of such a school in the past, the present relations of this country with the tropics, both in a business and also in a governmental way, now render such a school imperative. The importance of such a school in the prevention of the introduction of disease through commerce, in the control of disease in our own country, and the suppression of disease among our neighbors in the tropics, should insure the support of the school. I hope soon to learn that the establishment of the school is assured, and then I shall begin to look for a decided increase in useful knowledge regarding the tropical diseases of our hemisphere."

Dr. W. G. MacCallum, Columbia University, New York City:

"I have long looked forward to the establishment of a School of Tropical Medicine and Hygiene in New Orleans, since it seems that that is the place in America best adapted for such a school. There the students and investigators could surely obtain in greater quantity than anywhere else the material necessary for such study; and I feel sure that the school will have the support and co-operation of every one interested in medical science."

Sir Patrick Manson, London School of Tropical Medicine:

"I wish the project every success, and if the kindred institutions in London can in any way help our colleagues in New Orleans I am sure we can be relied on to do our best. I feel quite sure the need of a well-endowed tropical school in America has only to be known to have all the money required placed at your disposal. Even in impecunious England we are getting the money, and surely our pushful cousins across the Atlantic cannot allow themselves to be beaten in work so necessary and beneficial. America requires tropical schools quite as much, if not more than England. The Government and the country generally now recognize what a boon they have been to all our tropical possessions, and it would be strange if the American triumphs over yellow fever and deadly Panama have not effectually appealed to your countrymen and stimulated them to renewed exertions in coping with the disease scourges of the tropics."

Dr. Joseph McFarland, Medico-Chirurgical College, Philadelphia:

"I have read your little pamphlet, 'Projet of the New Orleans School of Tropical Medicine and Hygiene or the Medical Department of the Tulane University of Louisiana,' with much interest. It seems to me that the arguments therein set forth are sufficiently cogent to convince any well-informed reader of the desirability, indeed, the necessity, of founding and maintaining such an enterprise."

Dr. C. Mense, Editor *Archiv für Schiffs und Tropenhygiene*:

"I am sure that the school, under your direction, will obtain a world-wide reputation."

Prof. E. Metchnikoff, Pasteur Institut, Paris:

"I find certainly very useful and desirable the institution of schools of tropical medicine in the countries where tropical diseases can be studied."

Dr. John K. Mitchell, Philadelphia, Pa.:

"The advantages possessed by a school of tropical medicine situated in New Orleans are, of course, obvious. The necessity for such teaching for tropical research work and for instruction in medicine of the hot countries is undisputed. There seems to me no subject in medicine of so great importance which is so little provided for, and I trust your plans will be successful."

The late Dr. John Herr Musser, University of Pennsylvania, ex-President of the American Medical Association:

"The Medical Department of the Tulane University does well by the science and art of medicine in arranging for the establishment of a School of Tropical Medicine. The location of the school and the advantages of a corps of skilled and enthusiastic teachers and experts in tropical diseases invites the support of the undertaking by every one interested in medicine and hygiene in our country. With the increase in our interests in tropical countries, it goes without saying that a school of such character has become a necessity."

Prof. F. G. Novy, University of Michigan:

"I am pleased to learn of the plan entertained by your school to establish a Department of Tropical Medicine. Your location is such as to make this step a most desirable one, and I am sure that the very best results will be attained thereby."

Prof. H. F. Nuttall, F. R. S., Cambridge, England:

"I sincerely trust that you and your colleagues will succeed in establishing a thoroughly efficient School of Tropical Medicine in New Orleans. There can be no question but that such a school should exist in America, and it appears to me that the City of New Orleans is eminently suited, geographically, for the work which you propose to undertake. I trust that the necessary endowment will be secured from public-spirited citizens and corporations in the United States, for any money that they may give will surely be well spent."

Prof. Edward B. Poulton, F. R. S., Professor of Zoology of the University of Oxford:

"I am confident that a great Department of Preventive Medicine and a School of Tropical Medicine in America would be of immense advantage, and that the Tulane University of Louisiana at New Orleans would be a peculiarly appropriate locality in which to found these institutions. The relation to the tropics is there so close that many of the problems could be studied with special advantages. Such institutions would be of the utmost value not only for the training of the large number of American medical men who practice in the tropics, both of the Old World and the New, but also for undertaking research into the problems which will certainly confront the students who have been trained in the school and who still keep in touch with their old teachers at the university. I shall look forward with the greatest interest to the establishment and to the rapidly growing success of these institutions. My acquaintance with those who are leading this movement convinces me that the new school will be conducted along the broadest possible scientific lines, and that its influence will be felt in all parts of the world."

Dr. Milton J. Rosenau, Department of Preventive Medicine and Hygiene, Harvard Medical School:

"New Orleans is the logical place in our country for such a school, and I believe, on account of its nearness to the tropics, the facilities for studying the diseases which threaten our own country are almost unexcelled. I wish you success in this new enterprise, which will place us abreast of European countries in their attack upon these subjects."

Professor Doctor Ruge, Marine Generalarzt, University of Kiel, Germany:

Liegt doch New Orleans so günstig wie möglich für eine Schule für Tropen-Medizin, Gelbfieber, Ankylostomiasis, Amebiasis, Pellagra, etc., alle Krankheiten, die in den Südstaaten weit verbreitet oder wiederholt dahin eingeschleppt worden sind, schaffen Ihnen ein weites Feld für eine segensreiche Thätigkeit."

Dr. F. M. Sandwith, Gresham Professor Physic; Lecturer at the London School of Tropical Medicine:

"We look to the United States to continue the magnificent work in stamping out tropical diseases, and the success already obtained in the Panama Canal and elsewhere encourages us to hope that uncinariasis, pellagra and many other problems affecting the health of the community may shortly yield to preventive efforts. The citizens of the United States will not be slow in following the lead which has already been given them,

and it is not too much to say that all the diseases of your great continent are preventable, and should be prevented by the application of present and future knowledge. Every rich man should be invited to subscribe to your endowment scheme, for there is no doubt that money so invested in your Tropical School will bring forth a speedy return. The day will come when every American physician, about to practice his profession in the Southern States or in your tropical dependencies, must undergo preliminary instruction in a tropical school."

Dr. W. A. Sawyer, Director California State Hygienic Laboratory, Berkeley, Cal.:

"I am greatly pleased to learn that at last plans are being formulated for the school of tropical medicine which we have so long needed in America."

Dr. Henry Skinner, Curator Academy of Natural Sciences of Philadelphia, Philadelphia:

"New Orleans is an ideal place for the American School of Tropical Medicine—I believe the best in the United States. All eyes will be upon it, and what it does will have a great bearing on tropical medicine everywhere in this country."*

Gen. George M. Sternberg, U. S. A., Washington, D. C.:

"There is no place within the limits of the United States that would be more suitable as a location for such a school. If you can secure a sufficient endowment and the services of trained men for research, your school ought to do much for scientific medicine, and especially for the prevention of tropical diseases."

Dr. John M. Swan, Watkins, N. Y., Secretary of the American Society of Tropical Medicine:

"The American Society of Tropical Medicine has systematically urged the necessity of the establishment of such a school in this country."

Dr. W. S. Thayer, Johns Hopkins University, ex-President American Society of Tropical Medicine:

"The opportunity for the study of tropical diseases in New Orleans is of the very best, and it seems to me a matter of the greatest importance that every opportunity should be offered for the study and investigation of tropical diseases at Tulane University."

Prof. J. L. Todd, Macdonald College, Canada:

"The establishment of a School of Tropical Medicine in the United States is a sign that the Republic wishes to take in tropical medicine a position equal to that in which it has attained in other branches of human activity."

F. V. Theobald, Vice-Principal Southeastern Agricultural College, Wye, Kent:

"I am very glad to hear you are starting an American School of Tropical Medicine, and you may be sure I will give it any support I can."

Dr. Henry B. Ward, University of Illinois:

"New Orleans is the natural gateway to the tropics of the New World; to it comes commerce, and with it comes disease to the aggressive nation to which we belong. To develop the commerce adequately

*Dr. Skinner also sent a short article on the subject, which was published in the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL, December, 1911, Vol. LXIV, p. 466.

we must control the disease. To do our duty by the world we must reach out and control it at the source, rather than by waiting its appearance in our own territory. There is no point at which a center for the study of tropical medicine and hygiene will be in as easy touch with the tropics as at New Orleans. Materials come in constantly, and will come still more with the development of new routes of commerce soon to be established, while the same conditions make it possible to go out after that which is needed for the work of such a research institution, with the minimum expenditure of time and money. There is another point in which I think you will have the advantage of any other school in existence. The great function of such a school is research, and even if that side is slower in its development it must be regarded as fundamental and emphasized at all times. Now, for research the investigator must be able to carry on experiments without regard to season, continuously, over long periods, and when the need comes, rather than when the calendar says so. In New Orleans the climate permits this, with slight expense, during the entire year, whereas at other places it has been a source of very large expense to continue such experimentation through the winter. One can hardly overestimate the advantage of being able to maintain readily these experiments regardless of season. The plan you have outlined seems to me very good, and you are right in emphasizing the importance of co-operation with boards of health and other organizations in spreading knowledge of such diseases, their means of introduction and prevention, and their general commercial and social importance. I should think the presentation of the case must appeal strongly to some of our more favored citizens, who have the means to aid, and who cannot be entirely without the sense of duty to the nation and the world, and of the privilege in advancing the welfare of mankind. Money devoted to this purpose means much, even commercially, and the brilliant successes of our medical men at Havana and Panama are a source of pride to the whole nation. I am confident that the proposed school has geographic and scientific advantages which will render its work an equally great source of pride not only to the citizens of the city and State, but also to all Americans, North as well as South, East as well as West."

Dr. J. H. White, U. S. P. H. and M. H. S., New Orleans, President Society of Tropical Medicine:

"No other city can offer anything like the natural advantages of location and environment, and, further, it is natural and proper that such a school should be a part of Tulane"

Dr. J. C. Wilson, Philadelphia, Pa.:

"The satisfactory teaching of tropical medicine requires particular local conditions—either a great commercial port in constant communication with many tropical and subtropical cities, or a populous city in a subtropical region. In New Orleans both these requirements are now fulfilled, and you only await the opening of the great canal to have them fulfilled in the largest measure."

Dr. Paul G. Woolley, Dean of Medical School, University of Cincinnati:

"I am overjoyed for you and for Tulane, New Orleans, Louisiana, and several other places, which, when added together, will comprehend the United States. We have needed just such a school in just such a place for a long time, and now that it has come, and that it is organized on broad, comprehensive lines, one feels that we in the United States need not long remain behind the European countries in studies in tropical medicine."

The late Surgeon-General Walter Wyman, U. S. P. H. and M. H. S., Washington, D. C.:

"The experience of American physicians in the United States and its insular possessions has demonstrated somewhat the effect of tropical diseases on the health of communities, and rapid advancement has been made in the study of these diseases. There is great opportunity for extending these studies and making practical application of the knowledge thus acquired for the improvement of public health. I am very much gratified to learn of the proposed establishment of a school of tropical medicine in New Orleans, and trust that your ambitions may be realized to make of it a center for tropical research, with the resulting good that will undoubtedly accrue to the community in which it is located and to the country as a whole."

I read these letters because they show that our ideas and plans have been from the first closely in accord with the counsel of experts, which counsel we are daily receiving.

Therefore, before taking up in detail the discussion of our plans, we should never lose sight of the fact that our work, while of the South and initiated by Southern enterprise, is not local, or sectional, or even national—but international in its scope.

In view of the importance and interest attaching to the work we are undertaking, it has seemed wise to me to outline somewhat carefully, and in detail, the plans we have decided upon in the shaping of its policies and activities.

It is impossible in the beginning of any enterprise to forecast the exact form which its manifestations in every instance will take. Some of the plans which I shall outline will doubtless be changed or possibly even abandoned. Other plans will probably be projected and realized, but I shall hope to say enough to place you in possession of the spirit and method of the work which we hope to do.

However, we may safely say of the new Department of Tropical Medicine, Hygiene and Preventive Medicine:

(1) It will have a definite, scientific point of view. The science of preventive medicine has been chopped up into several more or less narrow fields, each of which has striven to annex and hold part or all of the ground for itself. Thus we do not produce hygienists with a broad and sound fundamental training upon which may safely be built subsequent specialization. All who have studied the training of sanitarians in our American Universities are agreed that, with a few notable exceptions, a lamentable lack of perspective and sense of proportion too often obtains. We have

statisticians who know nothing of the interpretation of the data they handle so easily, sanitary engineers who know nothing of sanitation, and medical entomologists who know nothing of medicine. The comparative novelty of the present conceptions of tropical medicine has attracted the interest of many who dream that acceptable work may be done in this difficult field without a critical and rigid training in the methods of scientific research that pertain to general medicine and hygiene. I have taught elementary bacteriology to an engineer whose specialty was the building of septic tanks!

There is one principle alone which is broad and deep enough to harmonize and interpret the data and doctrines employed by the statistician, anthropologist, sociologist, economist, physiologist, bacteriologist, parasitologist, entomologist, engineer, physician and tropical expert, all of which go to make the science which our new department will attempt to teach. Bacteriology, engineering or medicine are none of them or all of them sufficient to co-ordinate and explain all that must be employed for our ends. Nothing less than general biology furnishes us with the key to our problem. As Huxley says, "There can be no doubt that the future of pathology and of therapeutics and therefore of practical medicine depends upon the extent to which those who occupy themselves with these subjects are trained in the methods and impregnated with the fundamental truths of biology." Consequently, we shall present a biological interpretation of public health and from this ground we shall plan our attack upon the great questions of tropical disease. The problems of health will be stated in the terms of general biology and the various public health activities will be viewed as springing from and relating to the primitive biological functions.

The diseases of man, which may be illustrated by the evolution of animals under domestication, will be approached along the broadest possible scientific lines, while the philosophical, economic and social aspects of the question will be reduced to their most practical and helpful phases.

The vital functions common to cell, individual and community, such as growth, waste, labor, rest, repair and decay, are to be viewed as finding some of their most natural and valuable expressions in child conservation, sewage and refuse disposal, industrial hygiene, house sanitation, food and water supplies and pre-

ventive medicine. The protection of the community may be viewed as an inevitable outgrowth of the original obligations of pack dwelling and sanitary law as one of the developments of the primitive rule of the pack. So the phenomena attaching to tropical and general disease and its control may be studied from different biological viewpoints, such as their relation to interdependence of organisms, their effect upon the persistence of type, their influence on organic evolution and their connection with the adjustment of organisms to environment. It seems to the speaker that in adopting such an orientation for our subject we get a point of view, a sweep and a grasp of our science that will enable us to train men whom we can expect to approach the mighty problems awaiting them with that freedom from prejudice and command of scientific method which will insure the value of their work and study.

(2) The instruction will be comprehensive. By comprehensive I do not mean that it will consist of a smattering of a large number of facts. I have rather in mind a comprehensiveness of principles and a wide range of their practical application. In this connection I may be pardoned for referring a little more fully to the plans which have already been outlined in the preliminary announcement of the aims of the departments. We have planned:

(1) Co-operation with boards of health, health officers, societies devoted to the study and prevention of special diseases or to the protection of childhood, churches, public institutions for unfortunates of every description, hospitals, the press, and with every sort of State, civic, commercial, social and other institution or organization interested or susceptible of interest in the prevention of sickness and suffering and the conservation of health and vitality.

(2) Health education of teachers and students in all departments of Tulane University which will result in higher general efficiency and scholarship.

(3) Informational training of public school and private teachers and pupils throughout the city and State, as well as of the general public, with special emphasis on rural hygiene where conditions suggest this. Courses suitable for school superintendents and teachers, gymnastic and other organizations having to do with physical culture, will be specially planned.

(4) Technical laboratory training of State, city and district health officers, training particularly adapted to conditions in the South. Such questions as the handling of infectious diseases, the making out of vital statistics and other important matters, will be taught, as well as such special problems as hookworm, malaria, pellagra, etc.—problems which, in a very real sense, bear upon the great aim of removing the immense handicap which, more than is generally realized, has too long hindered the material and higher welfare of our Southern States. Extended courses which will enable carefully-chosen men to become skilled sanitarians will form one of the features of the department.

(5) Definite training in the study of various tropical diseases which constitute a distinct menace to all parts of our country, especially to the South, and in a very particular sense to New Orleans. Courses for the general training of undergraduate students of medicine will be conducted, which courses will lay emphasis upon the points necessary for every practitioner in the South to know. Other more elaborate courses will seek to fit medical missionaries, colonial officers and other medical men who expect to practice in warm countries. Besides these, special training in the technique of research and independent investigation will be designed to meet the requirements of specially-fitted men. It is hoped to publish the results of those who succeed in adding to our knowledge, and thus to our control, of tropical disease, and to aid and inspire competent research workers in every possible way.

As illustrative of these general plans perhaps a more concrete statement of a few of the practical details already in our minds may be of interest. In some instances these are definite plans already in process of realization or perfectly possible in the near future. In other cases the ideals are to be regarded as ardent hopes the attainment of which will depend upon the co-operation and sympathy of the authorities and faculties of the University (which I am sure we may count on to the fullest extent), and upon the public, the medical profession and financial support of our city, our State, the South and the nation (which I have every reason to believe will also be ours to a greater and greater degree as we make our needs and the value of our work known).

Some of the special projects we have in mind, and which we shall attempt to realize as soon as possible, are the following:

(1) The fitting up of a Laboratory of Hygiene and Tropical Diseases with all the apparatus necessary to teach these branches according to the most modern, practical and scientific methods. We have in the Hutchinson Memorial Building the space needful for all our present needs, and as the work grows we hope in the future some good friends of Tulane will give us a building which will be a model of its kind in every regard.

(2) We hope to found a Departmental Library dealing with Hygiene and Tropical Medicine, Parasitology and allied subjects which will form a mine of wealth for research and reference and which will make it unnecessary for anyone interested in these questions to go elsewhere for any important reference. In connection with this library we plan to have complete card indexes which will place at the disposal of any worker not only the resources of our library, but also of the literature of the world.

(3) We expect to build up a museum of educational and scientific value, consisting of specimens, drawings, exhibits, etc., which will add vastly to the value of the Department. For instance, one of the features of this museum should consist of a complete teaching collection of disease-carrying insects and other arthropods—a much-needed thing which cannot be found in this hemisphere, nor, in its best form, in the world.

(4) In connection with the Department we need well organized and carefully conducted clinical services in our hospitals, which contain such a wealth of rare and valuable tropical material. In time special wards or even a special institution may be needed to fulfill the plans to the fullest degree.

(5) A bulletin or publication of some kind is needed in which we may publish our reports and the results of our researches and investigations. This, of course, may at first appear irregularly and may be confined to the special interest of the School, but later should be expanded into the recognized *Journal of Tropical Medicine and Hygiene* of this country and the official organ of the American Society of Tropical Medicine.

(6) An extensive correspondence must be carried on with leading authorities and institutions throughout the world, keeping us in touch with all that is latest and best in our field. Question blanks concerning certain problems must be sent to tropical workers in different countries and the widest range of scientific opinion and observation elicited.

(7) Visits and expeditions to sister schools and to tropical countries should be planned for the elucidation of particular problems and in order to secure complete co-operation between the schools and laboratories devoted to Hygiene and Tropical Medicine both in the United States and Europe and also in tropical lands. In this connection, the speaker might state that he is personally anxious to revisit in his new capacity the schools of tropical medicine of London, Liverpool, Hamburg, Paris and Lisbon, and mention might be made of our dream of a floating laboratory which might visit ports in Central and South America, including the vast territory drained by the Amazon and its tributaries, which we hope some present or future friend of the School will give us.

(8) Again, special lectures and addresses, both scientific and popular, and open to the public, are planned in connection with the

School. Eminent authorities will be invited to deliver these, and it is hoped that great interest will be aroused.

(9) Last and most immediately practical of all, the Department will make definite sanitary and epidemiological surveys from time to time and propose plans and measures against the many influences still retarding the health and prosperity of the Southern States.

These are some, not all, of the plans we have in mind, and I have mentioned them, not only in order to lay before you some of the possibilities of such a school, but also that you may know that we are looking far into the future and attempting to lay broad and deep foundations upon which may be built an edifice worthy of Tulane University, of this city and State, of the South and of the Nation.

(3) And finally, we may say of the instruction of the Department, it will be practical.

Tropical Medicine and Sanitation together form a body of knowledge which is almost exclusively concrete and practical in nature.

Comparatively little didactic instruction is necessary or appropriate for the courses which we have outlined to cover the instruction which should be given to fit our students for the practice of sanitation and tropical medicine. It would be as ill-advised to attempt to teach chemistry, bacteriology or internal medicine from books or by lectures as the subjects in our department. The work must largely be done in the laboratory, in the hospital and the field. And in a very real sense all these are laboratories. A hospital is a laboratory in the genuine meaning of the word, and the man who observes scientifically a sick person or who experiments scientifically with sanitary apparatus outdoors are both to be classed as laboratory workers.

This conception of our work is in close accord with the most authoritative opinions on the subject. For instance, the Report of the Carnegie Foundation for the Advancement of Teaching, already referred to, recommends that a "close relation be secured between agencies concerned with public health and those devoted to medical education. The public health laboratory may become virtually part of the medical school—a highly stimulating relation for both parties. The school will profit by contact with concrete

problems, the public health laboratory will inevitably push beyond routine; prosecuting in a scientific spirit the practical tasks referred to it."

With this spirit animating us, we have proposed the following courses, which we offered beginning with October 1, 1911:

(1) A laboratory course in Tropical Medicine, Hygiene and Preventive Medicine required of Junior Students of Medicine for 1911-12. It is planned to give this course, somewhat developed, regularly hereafter. The work consists of lectures, demonstrations, laboratory periods, field work and clinics.

(2) A Lecture and Demonstration Course in Tropical Medicine, Hygiene and Preventive Medicine required of Senior Students for 1911-12. The work includes lectures, demonstrations, clinics and some field work. This course has been devised in order to give the present Senior Class as much advantage as possible in the new Department, and it is intended after 1912 to discontinue the course as at present conceived and to divide and extend the work of the preceding course so as to occupy both Junior and Senior Classes.

(3) A broad non-technical elective course on the Principles of Hygiene, both from a general and from a personal standpoint, suitable for teachers, school superintendents, Y. M. C. A. workers, physical directors, instructors in gymnastics, social workers and general students. This course will consist of laboratory periods, field work, demonstrations, reports, conferences and lectures. The course will last 12 weeks, from October 1 to December 30. It is intended to offer this course each year.

(4) A technical elective course in Public Health and Preventive Medicine designed for the training of health officers, physicians, sanitary practitioners, and teachers, and others interested in advanced hygiene. This course will extend from January 1 to March 31, and it is intended to offer this course also every year. The course will be open to graduates and undergraduates in medicine and engineering and others approved by the University authorities and the Head of the Department. The work will be largely practical, and will consist of laboratory periods, field work, surveys, reports, experiments and discussions.

(5) A general and special course on Tropical Diseases open to graduates and students of medicine and other qualified persons approved by the University authorities and the Head of the Depart-

ment. This course is planned to equip medical men and women and especially qualified laymen, including medical missionaries, both Catholic and Protestant, who expect to proceed to the tropics or who are on furloughs from the tropics, so that they will be adequately prepared to recognize, treat and investigate the diseases peculiar to warm regions. The work will consist of laboratory periods, demonstrations, exhibits, clinics, lectures and student investigations, and will extend from April 1 to June 30 each year.

The three preceding courses are so planned that they may all or any two of them be combined into one longer course, and it is proposed to grant a certificate of attendance and efficiency to students taking any or all of them and passing an examination on the work done.

(6) A special course in Medical Parasitology open to students and graduates in medicine and other qualified persons. The work will be largely practical and will include advanced laboratory technic and methods of study. The duration and periods of this course will be arranged with the applicants each year.

(7) A special course in Medical Entomology consisting of practical field and laboratory work on the arthropods concerned in disease transmission. Students will be required to do systematic bibliographical work, and the entire technic of the subject will be practically taught. Open to graduate students, advanced undergraduates, physicians and students of medicine and other special students accepted by the University authorities and the Head of the Department. The duration and periods of the course will be arranged each year in conference with those entering for it.

(8) A research course consisting of selected problems in Public Health and Preventive Medicine. Properly qualified students may enter at any time and are advised to choose all their work along one of the general branches of hygiene, viz., sanitary chemistry, sanitary biology, preventive medicine, etc.

(9) A research course on selected problems in Tropical Medicine. Properly qualified students, both graduates and undergraduates, may enter this course at any time, and opportunity will be given such to enjoy as many laboratory and clinical advantages as they desire. Such students will also receive suggestions, advice and criticism regarding bibliographical usages, methods of investigation and details of publishing results of their studies.

(10) A research course in Medical Parasitology taking up problems suggested by or meeting the approval of the Department. Approved students may enter at any time.

(11) A research course in Medical Entomology. Special problems will be worked out in the field or laboratory of the Department. Qualified persons will be received at any time as students.

In addition to the foregoing we hope some time in the near future, when our staff is increased and fuller arrangements are completed with other Departments of the University, to offer at least two other courses, namely:

(12) A lecture and demonstration course in Public and Personal Hygiene from the standpoint of General Biology for all general undergraduate students of the University. The instruction will be given to both men and women, and it is hoped that various lectures of such a course will be given by specialists from other Departments of the University and from other institutions.*

(13) A course on First Aid to the Sick and Injured from the Standpoint of Preventive Medicine open to all students of the University and to other approved persons. The sections should be limited to 20 students, and the course will consist of lectures, demonstrations, drills and other practical work. The instruction will be given to both men and women, and on its completion and the taking of an examination the students will be recommended for the National Red Cross Diploma.†

It is possible, even probable, that applicants for all these courses will not appear during the first, or even the second year, of our history; but we have looked forward to the time when Tulane shall be the center of such instruction in this country, and we hope to continue to offer adequate courses until students realize their value and avail themselves of their advantages.

Such are in brief some of the plans we have in mind for our Department, and we hope to have your interest and aid in their realization. For the success of this venture is dependant upon the co-operation it receives from you. New Orleans, the inevitable heir of tropical medicine and hygiene in the Western Hemisphere, has said she wanted this Department, and I am sure she will not let

* *Vide* my lecture on "Hygiene and The Modern University," delivered March 5, 1912, in the Annual University Extension Course of Tulane University, and published in the *Tulane Graduates' Magazine* for January, 1912.

† *Vide* lecture on "Hygiene and The Modern University," *op. cit. supra*.

it die for want of means. We are starting in a modest way, without much *eclat*, but I believe we are starting a great enterprise.

Mr. President and Gentlemen: I do not wish to grow oratorical; I am not carried away by personal wishes or glittering generalities. I have not voiced in this address one-half the enthusiastic hopes expressed by those who are among the soberest and most cautious scientific minds of our generation, whose letters are on file as part of the archives of the nascent Department which we present to Tulane University, to New Orleans, and to the South, for your approval and your support. It is your Department, and the School which we hope to see developed in our midst will be your School. I, whom you have so highly honored in calling to aid in its organization and direction, and the colleagues who have gathered around me, cannot and should not be asked to assume the cares of the financial foundation of the institution. We shall be jealous of its scientific reputation, solicitous for the quality of the training given the students committed to our charge, accountable for the character and weight of the scientific research accomplished and published and responsible for the value and influence of our work in meeting the problems before us, but to you we look for the funds necessary to develop and use the great opportunities around us. To you, the Officers, Faculty, Students and Alumni of Tulane; to you, the Medical Profession and Citizens of New Orleans and of Louisiana; to you, the People of the South and of the Nation, we commit the fate of a great and beneficent possibility!

Modern Sanitation.*

By OSCAR DOWLING, M. D., Shreveport, La..

President Louisiana State Board of Health.

In an active campaign for the reduction of disease and death, the Health Officer meets obstacles varying widely in character. Many are obvious and tangible. The hostility of individuals is a foregone conclusion; the apathy even of the intelligent, and the negligence of local authorities are common in every community. But there is one kind of opposition not so evident as these. Yet, it is positive, firmly rooted, and is clearly apparent to those engaged in the work.

* Read before the Orleans Parish Medical Society, March 11, 1912.

I wish to speak of it briefly because I believe physicians are unaware of this undercurrent and I also believe that it does the profession an injustice.

The public mind, or what is called public sentiment, is the only force in a democracy that can be counted on to bring about a reform. Especially is this true when the change means the introduction of ideas radically different from those traditionally accepted. It is of great importance, therefore, to know the temper of public opinion in the interest of any work for general welfare.

In relation to Health work to-day, the public is not sure of the attitude of physicians as a body. Do they indorse the plans and methods of Preventive Medicine? Are they in sympathy with the "New Public Health" movement? Or, are they afraid the effort is only a spasmodic, unscientific attempt which will end in failure? The controversy by laymen over the Owen bill reveals this attitude of mind among even intelligent thinkers on legislative questions.

It is sometimes wise to be ultra-conservative. Perhaps, the medical scientist knows this better than other professional man. But when a movement in its effect is so evident as that of prevention, surely it is not wise to be negative or even conservative.

In this country, we have lagged behind Germany and France and other foreign nations in the application of principles of sanitary science. We have been negligent in the adoption of elementary measures no longer experimental. But the speed and intensity of the progressive health movement during the past five years makes it plain that the people can never again resume the old attitude toward disease and insanitary environments.

The impression that the doctors are hostile is a misapprehension. It results from a negative attitude on the part of some who do fear a change in the status of the physician. In remote districts, even in small towns, a reform is likely to be judged largely from exaggerated reports of its radical features. In this case prejudice will engender actual hostility.

A friend of mine overheard, in the lobby of a hotel, the criticisms of a retired doctor on an article that had appeared in the morning paper. It was a resume of facts relative to cerebro-spinal meningitis, briefly stated, but containing a few technical terms.

Each paragraph was read and the attention of the crowd called to the use of these terms, one, meningococcus being especially at-

tacked. Near the conclusion where the text reads that serum treatment lessens the mortality and reduces the proportion of disastrous sequelæ the comment was an emphatic statement that "none of them ever got well." How much of what the old-time physician said was due to conviction it is impossible to know, but from my friend's description, the words had weight with every bystander. They laughed and agreed that "The new-fashioned doctors didn't know all they think they know." The doctor is more potent in shaping opinion than he sometimes realizes. In rural districts, often, his word is "law and gospel." A positive stand by every member of the profession for preventive measures would insure the success of the movement; a negative, indifferent attitude means retardation but not failure. It may be there is a fear that the practice of medicine may become the function of the State, or of endowed institutions; or, the belief that less sickness will mean ultimate ruin. The former is far from us—if indeed it can ever be; the latter might be considered imminent if the new movement were wholly destructive in character.

But the science of prevention opens many attractive paying lines of medical activity. This is a day of specialization. The general practitioner does not fear the specialist; he welcomes him as an ally. In every line of scientific work specialization is practiced more and more and with profit.

I believe within ten years that the demand will be greater than the supply for trained administrative sanitarians, general inspectors; inspectors of foods, meat, milk, and other supplies; sanitary and medical inspectors for factories and schools; sanitary engineers; directors of parks, playgrounds and athletic sports; nerve specialists for attendance on juvenile courts and in hospitals for the insane; instructors in hygiene in social centers and schools, and public lecturers.

Bacteriologists, expert diagnosticians and medical specialists will more and more command the respect of the public.

The general practitioner will be called on not so often to cure the sick. His function will be to keep the individual well.

This coming order depends on the people, but on the physician as well.

In New Orleans insanitary defects are many. Their removal will be difficult but not impossible. There is much already done that is

fundamental, but as yet, it has not been fully appreciated. There are within seventy thousand homes forty-nine thousand which are unconnected with the sewerage system. This is the defect most dangerous to public health. If every physician here would use his influence to remedy this evil, in three months, at the outside six months, there would be a transformation in this particular.

Extermination of flies and mosquitoes would be equally an easy problem with concerted action on the part of all physicians.

Moreover, this would not imply sensational measures. It would mean simply the exercise of the influence which is the physician's by right, by virtue of what he is. I believe these premises are true because public opinion on health matters is still individualistic. Therefore, the physician is the potent factor in health education. The needs for effective action are primarily social. Existing health organizations are sufficient in number and other social agencies are at hand if they could be organized for co-operative activity. The medical societies could easily lead and dominate the movement.

The motive of social service, as contrasted with that of private gain, obtains more largely in medicine and surgery than in any other profession. The pages of present-day history as well as the years of the past teem with examples. A notable one is that of Dr. S. M. Babcock, who set aside a colossal fortune when he refused to take out a patent for the milk test which bears his name. He is one of thousands.

Effective action is the present need. Concerted activity by those organizations powerful in influence and of these there is not one more powerful than the medical society.

ADDENDA TO DR. DOWLING'S PAPER.

MEMPHIS.—Business men raised \$50,000 for publicity fund. Land along the new Parkway increases in value from \$279,000 to \$837,000 in a few years.

ROCHESTER.—Removed educational and health departments from control of politics. Used school-houses as social centers for meetings of citizens for the "come-together-meetings."

CLEVELAND.—A poor city; 100,000 population. Chamber of Commerce announced that \$25,000,000 would be needed for rehabilitation. That was ten years ago, and the work is half done.

DES MOINES.—The dirty, disreputable river front will be in a short time a thing of beauty and civic pride. Retaining walls of concrete and a parkway will stretch along both banks through the business section.

KANSAS CITY.—"The Park City." The "McClure Flats." A block of small, unventilated adobe houses with saloons and a vice section was condemned by the "Board of Public Welfare." Buildings were condemned

for insanitation; some for extensive alterations and repairs. Scores of adults and children were removed in this way from the deafening influence of vice. Ten million dollars have been spent in drives and parkways, the owners paying the assessment, which straightway increased the value of the property from 100 to 400 per cent. Kansas City has won the worst half of its fight for a sanely beautiful city, and increased its population 51 per cent.

Washington, Buffalo and Detroit have incorporated the first principle of all cities—planning the establishment of a definite civic center from which the whole city radiates. Cleveland has its \$25,000,000 civic centers half complete.

CHICAGO.—Began by spending \$75,000 for drawings to illustrate how it was going to spend a quarter of a billion in reconstruction. One of the first steps has been started—the widening of Twelfth street, which, under the new plan, will be the central mall from which the city will radiate.

BOSTON.—“Boston 1915” movement is the greatest effort, started by the City Club, that so far has been planned.

More than one hundred and fifty cities last year had “Know Your City” or “Cleaning-Up Celebration.” School children asked to help.

Commercial clubs, chambers of commerce and other municipal organizations have been originators and promoters of these improvements. In every instance “better citizenship” is the slogan.—Taken from “Awakening of Cities,” *World's Work*.

The Diagnostic Value of the Reaction Following the Intravenous Injection of Salvarsan.

By ABNER H. COOK, M. D., Hot Springs, Ark.,

Formerly Instructor in Anatomy in Tulane University of Louisiana, New Orleans.

The theory that the reaction following an intravenous injection of salvarsan is produced by endotoxin eliminated by dead *treponema pallida*, and the deduction that the greater the syphilitic infection the more severe the reaction is accepted by some of the profession to the extent that it is being used by them as a test for syphilis, and as a gauge by which to govern the extent and amount of treatment.

If the above were true the deductions that—

- (1) No reaction—no syphilis—no treatment,
- (2) Mild reaction—mild infection—but little treatment,
- (3) Severe reaction—severe infection—severe treatment,
- (4) When no reaction occurs after the second, or subsequent doses the patient may be pronounced cured and all treatment discontinued,

would not only be justifiable but accurate and safe.

The clinical evidence in my series of cases at first seemed to support these supposed facts, and, while never administering a

dose of salvarsan for diagnostic purposes or to any cases other than those distinctly syphilitic, I allowed the severity of the reaction to influence the length and amount of treatment. The following case is typical of those upon which this opinion was based:

CASE 1. August 3, 1911. Bellefontaine, Ohio. White male, American, age 35, postman, married; three unhealthy children.

Venereal History.—Sore on penis in 1902, followed in a few weeks by secondaries, lasting about six or seven weeks. No further symptoms until March, 1911, when right testis swelled, and in a short time began to discharge. In April, 1911, sores appeared upon bridge of nose and roof of mouth.

Previous Treatment.—Internal medication for about two months while secondaries were manifest.

Examination.—Syphilitic ulcer over both nasal bones; nasal septum almost entirely gone, and vomer involved; hard palate perforated; necrotic gumma of right testis discharging upon posterior surface of scrotum. Slight general glandular enlargement. Pupillary reaction sluggish; patellar reflex normal.

Treatment and Progress.—August 3, 1911. Mercurial inunctions and potassium iodid instituted. Improvement very slow, and salvarsan advised.

August 18. Intravenous injection of salvarsan administered at 8:30 A. M.; 10:20, chill, followed by vomiting, severe headache and pains in the bones; temperature reached 102.6° at 12:30, and was normal at 7 P. M.

August 20. Mercurial inunctions and potassium iodid resumed; lesions began immediately to improve.

September 10. All lesions healed, except testicular gumma. Salvarsan administered 8:00 A. M. Temperature rose to 100° at 12 M. Normal at 3:30 P. M. No other signs of reaction.

September 14. Mercurial inunctions and potassium iodid again instituted.

September 30. All lesions healed; patient felt perfectly well. Salvarsan intravenously administered; no reaction.

October 3. Patient left Hot Springs for his home, with instructions as to future treatment, seemingly well.

The severe reaction after the administration of the first dose of salvarsan and the clinical manifestations of a severe infection, with a slight reaction after the second dose, when lesions were healing fast, and no reaction when last dose was administered, with all lesions healed, seemed to be proof sufficient, especially when accompanied by many like cases, that the employment of the reaction after an intravenous injection of salvarsan as a test for syphilis is accurate and the reaction safely attributed to the elimination of endotoxins by the dead treponema.

That a severe reaction is sometimes obtained in mild infections and no reaction in severe infections, however, destroys my belief in these assertions, and I believe will influence the opinion of others.

CASE 2. September 14, 1911. Hot Springs, Ark. White, male, American, age 26, electrician, widower; one child.

Venereal History.—Gonorrhea several years ago. Second infection appeared September 12, 1911. On September 26, while I was treating his gonorrhea, the patient called my attention to a red papule on the dorsum of his penis immediately behind the corona. September 28. Papule presented an ulcerated apex and slight induration. September 30. Smear made and *treponema pallida* found. October 3. Wassermann reported negative.

Treatment and Progress.—October 5. Intravenous injection of salvarsan administered at 8:45 A. M. Chill at 11:05, followed by vomiting, headache, severe pains in bones. Temperature reached 102.6° at 1 P. M.; normal at 6 P. M.

October 7. Mercurial medication instituted and continued until present date.

The mildness of this case is shown by the fact that the infection was not old enough to produce a positive Wasserman and no secondaries had developed, yet the reaction was very severe. There was no doubt as to the presence of the *treponema pallida*.

Another type of mild cases presenting a severe reaction after an intravenous injection of salvarsan is represented by the following case:

CASE 3. October 2, 1911. Temple, Texas. White male, American, age 37, insurance agent, married; no children.

Venereal History.—Chancre, July, 1910. Secondaries a few weeks later, at which time I saw the patient in my father's office.

Past Treatment.—August until October, 1910, daily inunctions of mercury. October, 1910, until present, intermittent protoiodid and bichlorid medication.

Examination.—No evidence of syphilis.

Treatment.—Salvarsan administered October 6, at 8 P. M. Chill, 9:35, followed by violent purgation, vomiting, headache, backache, temperature reaching 103.6° at 2 P. M.; normal at 8 P. M. October 7. Severe headache and pains in bones. Still confined to bed. October 8. Very weak; fever blisters present.

Patient is now on mercurial medication.

The mildness of this case is evidenced by the mild secondaries and the ease with which all symptoms were controlled. He has been in perfect physical condition ever since his secondaries disappeared.

The class of cases that first caused my disbelief in the theories stated were those which presented a malignant type of syphilis and no reaction was obtained after an intravenous injection of salvarsan. The following, by no means an isolated case, is an example:

CASE 4. January 21, 1912. Lake Mills, Wis. White male, German, age 29, barber, married; three children.

Venereal History.—Sore upon penis, 1892. No secondaries. Ulcers appeared upon forehead and nose in March, 1911. Throat became sore, and headaches developed. Symptoms became constantly worse.

Previous Treatment.—Sore upon penis treated locally, internal medication, for about two months, at time of sore.

Examination.—Four typical syphilitic ulcers upon forehead, one upon bridge of nose. Posterior nares; pharynx and larynx presented a severe catarrhal inflammation. Hard palate perforated. Round pigmented spot, $1\frac{3}{4}$ inches in diameter, over third rib in midclavicular line.

Treatment and Progress.—January 22. Mercurial inunctions and potassium iodid instituted. Improvement slow.

January 30. Intravenous injection of salvarsan administered. No reaction.

February 3. Mercurial inunctions and potassium iodid reinstated. Patient improved rapidly.

February 19. Intravenous injection of salvarsan. No reaction.

February 24. Mercurial inunctions and potassium iodid continued.

The patient is now free from all symptoms, but is still on mercurial treatment.

This was the most malignant case of syphilis, to have been so long latent, that I have ever seen, yet no reaction occurred after either administration of salvarsan. At first, in view of the obscure history, I began to fear that I had erred in my diagnosis, but the prompt response to specific treatment proved that I had not.

Cases presenting, after an intravenous injection of salvarsan, phenomena the converse of those presented in cases represented by Case 1, stated above, are conclusive that the theories stated are incorrect, and, therefore, the reaction has no diagnostic value. The following is given as an example:

CASE 5. January 17, 1912. Meridian, Miss. White male, American, age 24, railroad clerk, single.

Venereal History.—Three sores appeared upon penis about November, 1909; secondaries soon followed. In January, 1910, ulcers begun to appear at various places. These would heal, only for others to appear at different localities. At no time has the patient been free from ulcers since the first appeared.

Previous Treatment.—Protoiodid pills and potassium iodid when secondaries first developed, until May, 1910. Injections of salicylate of mercury for several months. Made trip to Hot Springs, August, 1910, and remained until September 25, following, during which time mercurial inunctions were daily administered. October, 1910, until January, 1911, protoiodid pills and potassimu iodid. February, 1911, an intravenous injection of salvarsan was administered by Prof. Rudolph Matas, New Orleans; no reaction; followed by several months of protoiodid pills and potassium iodid. During November and December, 1911, several doses of sodium cacodylate were given, after which all medication was discontinued.

Examination.—Serpiginous ulcers beneath *alæ nasi*, general glandular enlargement, and several pigmented scars over the surface of the body.

Treatment and Progress.—January 17. Mercurial inunctions and potassium iodid instituted. Improvement slow.

January 30. Mercury and potash continued. Improvement rapid.

February 15. All lesions had healed. Intravenous injection of salvarsan at 8:30 A. M. Chill at 10:30; vomited; severe headache; temperature 101.4° at 2 P. M.; normal at 8 P. M.

February 18. Mercury and potash continued.

March 2. Patient left for home.

(This patient was a college graduate, the son of a physician, and took

the keenest interest in his case. Therefore, I was able to get almost a perfect history of his previous treatment.)

That this was a very malignant case is thoroughly demonstrated by the resistance of lesions to proper treatment. When the disease was most active no reaction was obtained after either intravenous injection of salvarsan, but a severe one followed the third dose when all signs of the disease had disappeared. Surely there was less infection when the last dose was administered than when the first and second were administered.

With such variations in reactions after an intravenous injection of salvarsan, the only conclusion possible is: as a test for the presence of syphilis or a gauge upon which to base treatment it is absolutely valueless, and the fact that only a very small percentage of my cases present a reaction causes me to look for another explanation of the reaction other than the elimination of endotoxins by dead *treponema pallida*.

As to the cause of the reaction, I am firmly convinced that it is due to the contamination of the distilled water used in the solution, which to me is proven by the following experience: When I first began the use of salvarsan intravenously a still was inaccessible and the water had to be brought some distance, consequently it was obtained the evening previous to the administration of the dose. While using this water a reaction invariably followed each dose.

Later a still was installed in the same building in which I administer salvarsan and I began to sterilize my containers, catch the water as it dripped from the still, immediately before using. Into this I put the necessary amount of salt and boiled the solution. After cooling to the desired temperature, by placing the containers into a bowl of cool water, mix the solution and administer. The entire time consumed, from the time the water starts flowing from the still until the solution is in the vein requires but from thirty to forty-five minutes. When I adopted this procedure I ceased, except in a very small percentage of cases, to have reactions.

These conclusions, as to the cause of the reaction, are substantiated by the recent work of Hort and Penfold, Swift and Ellis, and publications of Wechselsmann, and, most recently, of Ehrlich himself.

Jackson's Membrane.

By C. D. SIMMONS, M. D., Kansas City, Mo.

The adhesions due acute subacute and chronic colitis radiating in most instances from a focal center, the head of the colon and now widely known in this country and Europe as "Jackson's membrane," is here to stay, so it must be met and dealt with to the best of our ability and always for the good of the patient. Dr. Jabez N. Jackson, of this city, is a pioneer in this work, and to him we owe most of our knowledge on this subject.

The membrane surrounds the colon, covering its serous surface, and is attached to the omentum of both sides. Owing to its extreme thinness it has been compared to a veil.

The condition, no doubt, interferes very seriously with colonic function, and may give rise to engorgement, partial obstruction, constipation, pain, fever and nausea. All of these symptoms are mainly due to checking the onward flow of the contents of the small bowel as it enters that poorly constructed gateway, the ileo-cecal valve. The pain is not always local in character, may be diffuse, or felt in some other organ, as the ovaries and tubes.

I saw a young girl of seventeen years operated on at the New City Hospital, a few days ago, where all the symptoms pointed to tubal or ovarian trouble, at the operation the tubes and ovaries were found in a healthy condition. The appendix was then inspected and appeared to be in a perfectly normal condition. It was perfectly free of adhesions, and a little further up the colon was seen to be completely covered by a thin membrane. In this case the membrane was firmly attached to the serous coat of the colon, and, in my opinion, the surgeon acted wisely in not attempting its removal, as it left a raw and bleeding surface, which would invite further adhesions.

In a case operated upon by my associate, Dr. Wm. C. Whittenberg, and myself, where the appendix had ruptured in eighteen hours after the onset of the acute symptoms, the membrane was beautifully illustrated. Now, this proves without a doubt the formation of the membrane long before the attack of appendicitis. Without going into greater detail, I think we are justified in saying that if carefully looked for, Jackson's membrane will be found with and without a diseased condition of the appendix. This makes the con-

dition extremely interesting in approaching a diagnosis in many of these obscure cases, and may shed light where darkness has prevailed. Just how often this membrane has upset our diagnosis at time of operation we do not know. Time will tell us more.

Louisiana State Medical Society Proceedings.

EDITED BY PUBLICATION COMMITTEE,

DR. JOSEPH D. MARTIN, Chairman, 141 Elk Place, New Orleans, La.

DR. A. NELKEN, New Orleans, La., read a paper entitled

Senile Hypertrophy of the Prostate.

The frequency with which hypertrophy of the prostate is met with in old men makes it a subject of general medical interest.

When a man past 50 complains of a gradually increasing frequency of urination, of having to get up several times to urinate after retiring, and of his stream lacking force, the diagnosis of prostatic hypertrophy is likely to be confirmed by physical examination.

However, we will sometimes fall into error if we are not careful to confirm our diagnosis by a careful examination of the patient.

I have seen at least three cases of stricture in old men diagnosed as prostatic hypertrophy, and in two of them, the diagnosis was corrected only on the operating table.

Certain diseases of the spinal cord, notably tabes and lateral sclerosis, are met with in the practice of every man doing genito-urinary work. And, not as infrequently as it should, it sometimes happens that these cases are sent to him by the family physician with a diagnosis of prostatic hypertrophy.

A rectal examination of the prostate should be made in every case of suspected hypertrophy. This gives us an idea of the size and shape of the gland, and is especially important because extreme hardness of the prostate is highly suspicious of malignancy.

But it is well to remember that failure to find enlargement by rectum, or even the finding of a prostate much smaller than normal, does not, by any means, rule out prostatic obstruction.

I have here a prostate that is little more than a band of fibroid tissue, and yet the patient from whom it was removed had a residual of over six ounces. Another specimen is less than one-half the size of the average normal prostate, and the patient had complete retention.

The most satisfactory method of making the diagnosis of prostatic hypertrophy, and the one with which we can not fall into error, is cystoscopy.

Except in a few advanced cases, where the prostate is extremely hemorrhagic, or where there is marked distortion of the urethra by prostatic out-growth, the use of the cystoscope is not only not difficult, but actually very easy, and gives the patient little or no pain or discomfort. It is only in exceptional cases that even a local anesthetic is required, and I have yet to see any unpleasant sequelae as a result of the examination.

With a little experience, we learn to recognize the prostatic shadow, and have no difficulty in appreciating any deviation from the normal.

In prostatic hypertrophy, we see what lobes of the prostate are responsible for the obstruction, and are able to gauge the degree of enlargement.

The ureteral orifices are usually readily seen, and we can study the urine as it spurts into the bladder. This may be of considerable importance, as showing pus or blood coming from the kidney. The degree of bladder trabeculation and the presence of diverticuli are of interest. Calculi, if present, can hardly be overlooked. In short, we know just what the intra-vesical condition is, without opening the bladder.

More difficult than the diagnosis, is the decision as to what is the best line of treatment in a given case of prostatic hypertrophy. The statement that every case of prostatic obstruction should be operated upon is as untenable as the now fortunately discarded converse that no case should be.

An early operation in a man in good physical condition is probably as safe as any other major surgical procedure. To wait until

the patient's health has been undermined by sepsis and long suffering before advising surgical measures is, to say the least, poor judgment on the part of the medical advisor.

But I do not believe that those cases where the patient is able to completely empty his bladder, and in which the only symptoms are some frequency and, possibly, some straining, are necessarily surgical. Even those cases of occasional retention due to some easily avoidable cause are often best treated palliatively. This is especially true if the general condition of the patient adds a large element of risk to any surgical interference.

As long as a prostatic is emptying his bladder, there is, necessarily, no danger of infection of stagnant urine. These cases may be temporized with, with directions to avoid alcohol to excess, chillings, sexual excesses—in short, anything which, by giving rise to an acute congestion of the prostate, may produce retention—and they should be tested from time to time for residual urine. Many of these cases will go for the remainder of their lives with nothing more serious than some frequency, some straining in urination, and, possibly, an occasional attack of retention requiring the use of the catheter by the physician. The important point in favor of operation is persistent residual urine. If a catheter has to be used regularly to empty the bladder, infection is almost certain to occur, and that in spite of the greatest care. In fact, in the majority of patients with residual, infection will occur in time, even if a catheter is not used.

Disregarding for the moment the very important point of the comfort of the patient, experience shows that his chances of life are very much less with the catheter than with an early operation. Rovsing reports ten deaths in 126 patients, due to the use of the catheter. In the hands of a competent operator, the mortality for prostatectomy in early cases is probably under 1 per cent. Infection occurring in a bladder with retention, the alkaline urine, the formation of calculi, and ascending infection of the kidneys all threaten the comfort or life of the sufferer.

The exception to the rule that these cases should be operated upon may present itself in men past 75, in whom catheterization is not especially difficult or painful, and whose physical condition is so very poor that any sort of surgical interference is likely to be fatal. This is the more especially true if their financial status is such that

they are able to secure skilled nursing. These old men have only a short while to live under any circumstance, and the surgeon does not feel called upon to play the part of executioner.

In Charity Hospital practice we sometimes operate upon cases where we feel that the chances are against success, but these patients can hardly be kept for an indefinite period in the hospital wards, and they are unable to secure proper attention if sent home.

The great danger in all operations upon the aged is kidney failure. In order to obviate this, if possible, the preliminary treatment of the patient is of much importance. The diet should be regulated and they should be encouraged to drink freely of water, unless there is a contra-indication in high arterial tension. They should be protected against chilling, and given an occasional purgative as required. An important factor in assisting kidney function is the removal of back pressure by relieving the residual. This may be done by regular catheterization, or by a retention catheter, but I believe the procedure of choice is a preliminary supra-pubic drainage of the bladder under local anesthesia. This is especially indicated in patients with highly septic bladders, for the operation not only relieves the pain and tenesmus of the cystitis and the pressure on the kidneys, but permits of frequent irrigation of the bladder, preferably through a retention catheter which is controlled by a bridle coming through the supra-pubic incision. Not the least important point in favor of the preliminary supra-pubic drainage of the bladder is that the subsequent removal of the gland, in favorable cases, can be done very rapidly, with a corresponding reduction in the quantity of ether required and the least degree of shock.

And the preliminary operation gives us a line on the resistance of the patient. If he develops uremic symptoms after a supra-pubic drainage, done under local anesthesia, the prospects of his surviving the graver operation of prostatectomy with general anesthesia are very poor. The wise surgeon will think twice before proceeding further in such a case.

An operation being decided upon, we are to settle upon what method promises the best results.

All substitute operations for complete prostatectomy, such as orchidectomy and vasectomy, as well as the Bottini operation, can be discarded without consideration. In all of them the mortality is

as high as it is with the radical operation. The Bottini alone occasionally gives satisfactory results, but with it, failure is the rule rather than the exception.

In spite of the often expressed opinion that the surgeon should decide between the supra-pubic and the perineal operation by the conditions found in the individual case, we find that the operators who do the most work are firmly wedded to one procedure to the exclusion of the other, the perineal operator rarely attacking the gland from above, and those who favor the high operation seldom removing the prostate by the perineal route.

The perineal operation has been popularized in this country by the excellent work and the enthusiasm of Young, but I think it safe to say that the supra-pubic operation is rapidly growing in favor. On the Continent, the French school have served to make the perineal, for a long time, the more popular operation, but the volume of cases reported by Freyer of London and by others who have followed his lead, has probably now made the supra-pubic the favorite of the two methods.

Any discrepancy in the mortality report of the two operations in the hands of skillful and careful operators is so small that there is little to choose between them on that score.

The advocates of the perineal operation claim for it that it is the anatomical method of reaching the gland, that hemorrhage is more readily controlled, that drainage is better by this route, that it is possible to remove small fibroid prostates that could not be removed by the supra-pubic operation, and that the operator can see what he is doing.

My preference is for the supra-pubic operation. It is undoubtedly the easier and the more rapid one. The danger of wounding the rectum, with all the disagreeable sequelae of recto-urethral fistula, is absent. The vesical cavity can easily be inspected by the eye if thought necessary, but, as a rule, the trained finger will give as much, or more, information.

I have never had unsurmountable difficulty in removing a fibroid prostate. The careful use of the scissors, although very rarely required, will prove of great assistance in clipping restraining bands, where the prostate will not peel readily from its sheath. I have had but one case of troublesome hemorrhage, and its management was not difficult.

Young attaches considerable importance to leaving that portion of the prostate that forms the floor of the urethra, and through which pass the ejaculatory ducts. The after-results of supra-pubic prostatectomy do not suggest that the prostatic urethra is essential either to potency or to control of urine. Incontinence is very rare, and those patients who were potent before operation do not, as a rule, find their sexual ability interfered with.

There is, however, an additional argument, which I think of considerable importance, in favor of the supra-pubic operation. According to many authorities, malignancy is often preceded by hypertrophy. Malignancy is found in from 5 per cent to 10 per cent of cases of hypertrophy, according to Green, 14 per cent according to Albarran, and Young says that 20 per cent of prostatic obstruction in elderly men is due to malignant disease.

It is evident that the supra-pubic operation, removing, as it does, the entire gland with the capsule, must sometimes prove curative in those cases of beginning malignant degeneration that have not yet involved the capsule and in which metastasis has not occurred.

The perineal operation, after the method of Young, leaving behind, as it does, a portion of the prostate, must favor recurrence in all cases of malignant disease of the gland. Young answers this objection by making an immediate microscopical examination of the prostate in every case where malignancy is suspected, and doing his radical operation for cancer of the prostate, if it is found. But this means the removal of the prostate, seminal vesicals, perineal urethra, and the trigone of the bladder up to the urethra. This is a formidable operation, and its value is still *sub judice*.

The operation of supra-pubic prostatectomy, as at present done, is repeatedly referred to as Freyer's operation. This is particularly inexcusable in America, where, as Young points out (Keen's Surgery, Vol. IV), Eugene Fuller, of New York, performed and described the operation of complete removal of the prostate by the supra-pubic route five years before Freyer did his first case. The technique of Fuller's operation, with the minor improvements that have been adopted since, are so well understood that I shall lay stress only upon a few points in describing it. The supra-pubic incision is made through the skin and fascia, and the muscles separated on the median line. The bladder, which has been thoroughly washed while the patient is being anesthetized, is then distended

with water, the degree of distention being gauged by the finger in the wound. Filling the bladder after separating the muscles permits of the maximum amount of safe dilatation of the bladder, for the finger feels the dilating viscus, and both under-distention and over-distention are avoided.

The transversalis fascia being cut through, the prevesical fat and connective tissue is pushed up, carrying with it the reflection of the peritoneum. The bladder wall is now exposed, and through it, from above downwards, are passed two silk bridles, about three-quarters of an inch apart, and a sharp knife plunged into the bladder between them.

The finger introduced through the bladder wound, selects a prominent part of the prostate, and either with the finger or with the scissors, the mucosa is scored through. If the scissors are used, care must be taken not to open the capsule of the prostate, for, a point that Freyer lays stress upon, a great deal of difficulty will be experienced if enucleation is attempted within rather than without the capsule. The mucous membrane being opened, the finger of the gloved left hand is introduced into the rectum, both for the purpose of steadying the gland and to make it present prominently to the operating finger. The finger in the bladder is carefully worked between the capsule and the sheath and enucleation proceeded with. No effort is made to save the prostatic portion of the urethra, and, usually, both lobes of the prostate, with the median lobe, if one is present, together with the prostatic urethra, is delivered *en masse*.

The bladder is then irrigated with warm saline solution through a soft catheter introduced through the urethra, the silk bridles withdrawn, and the muscles and skin closed around a large drainage tube, which reaches into the bladder, but does not touch its floor.

Where the patient will have careful nursing, and we are sure that he will be kept dry at all times, I think it well to omit drainage with a catheter in the urethra. But where this close attention is not available, the retention catheter, which is controlled by a bridle attached to its bladder end and coming out of the suprapubic opening, adds much to the comfort and even to the safety of the patient. This bridle affords an efficient method of packing the prostatic cavity in the event of troublesome hemorrhage. By tying a wide piece of gauze to its free end and then pulling the catheter with the bridle attached out of the urethra until the gauze pack is tightly

wedged in the prostatic cavity, bleeding can usually be controlled. If required, the gauze can be opened and packed with narrow strips after the manner of the Mikulicz drain. I do not think that the immediate packing of the prostatic cavity is good practice. Hemorrhage is rarely alarming or persistent after suprapubic prostatectomy. The only case in which I packed was the only one in which I had hemorrhage. This patient had an alarming secondary bleeding sixteen days after the operation, and it was necessary to reopen the wound and to repack the prostatic cavity.

Many operators infuse immediately after the operation. I think that the administration of large quantities of water as soon as possible after the patient has recovered from the anesthetic will usually be found sufficient. If, for any reason, the patient cannot be given water by mouth, the Murphy drip offers a simple and efficient method of administering large quantities of fluid.

The patient should be kept clean and dry, and, especially, he should be kept warm. It is very important to get these old men out of bed with the shortest possible delay. I like to have my patients in a chair by the third day, and, where their condition permits, I get them out in thirty-six hours.

Too much stress cannot be laid upon the after-care of these cases. Many a patient will be saved by good nursing that must have inevitably have died without it.

The time required for the closing of the suprapubic wound varies widely, being influenced by the general condition of the patient and by the degree of muscle sloughing that occurs after the operation. The shortest time in any of my cases was two weeks, but I have seen it take several months. Occasionally, a pin-point opening will persist for a long time, which does not leak while the patient is on his feet, but which will get him wet when he is in bed. But I have not seen a case that did not eventually close, provided there was no urethral obstruction. It has not seemed to me that the retention catheter was of a great deal of assistance in favoring the closure of the suprapubic wound, but it serves to keep the patient dry, and so adds to his comfort.

One of the more common complications of prostatectomy is epididymitis. This is of so frequent occurrence that some operators have adopted the routine practice of ligating both vas before removing the prostate. In my opinion, the use of the retention catheter favors the development of epididymitis.

The end results of prostatectomy are nearly always good, and there is little to choose between the high and the low operation in this respect.

A man whose life is made wretched by pain, loss of sleep and invalidism, finds himself restored to comparative health and usefulness. From being a burden to himself and to his family, he becomes a happy, and even a useful man, who is able to live out the autumn of life in comfort. There are few more grateful patients than those who, after long suffering, have been the subject of a successful prostatectomy.

I have operated upon seventeen cases of enlarged prostate, with three deaths. This number is too small to make a statistical report of great value, and my mortality rate is higher than that reported by many other operators. But my deaths have all occurred in Charity Hospital cases, where both as to the physical condition of the patient and the after-care were not ideal. There is excellent precedent for explaining away the mortality after prostatectomy, and I might be excused if I follow so satisfactory a course.

One of my cases died of pneumonia two days after the operation, due, I believe, to exposure during the preparation of the field for operation. Another case died of kidney failure, three weeks after being operated upon, and the third death was in a man of 84—a bad surgical subject—and a case which I do not believe that now, with a larger experience, I would attempt a radical operation upon.

In the remainder of those cases that I have been able to follow the end results have been uniformly good. They are relieved of their pain and tenesmus; bladder control has been restored, and those patients whose sexual function was good before the operation do not seem to be affected adversely since.

DISCUSSION OF PAPER BY DR. NELKEN.

DR. JAMES A. NEILL, Alberta: I am not prepared to discuss the doctor's paper at length, but I should like very much to say a few words on it. From what little experience I have had I do not believe that all these cases should be operated upon. I believe there is a remedy that will promise them more satisfaction or better results than operation itself. I have seen a few of these patients operated on in hospitals, and have noticed the results. In

November, 1908, I was called in consultation to see a man, 65 years of age, who was then living with this third wife, a young woman. He was the father of sixteen children. He had cystitis, and a frequent desire to urinate. The doctor gave him some relief, but at midnight I was called to see him, introduced a catheter and relieved him. After making an examination I found that he had enlargement of the prostate, and I said to him he would have to undergo an operation, or that electrotherapy might do him good. He replied that he was willing to try anything before undergoing an operation. I took him to Shreveport and placed him under my friend, Dr. Barrow, who gave him the benefits of electrotherapy for about six weeks. He was then able to return home very much improved. That was more than two years ago, yet I have heard no complaint of a return of the trouble. He was able to attend the Confederate Reunion at Little Rock recently. He was in a critical condition when treatment was first begun with him. The prostates were large, like walnuts, and so completely blocked the passage that he had to be catheterized for every evacuation of the bladder. A short time after seeing this case I was in a hospital in Little Rock, Ark., where I saw a man who had recently had an operation for enlarged prostates by a good surgeon. He was then unable to pass urine, and it was necessary to catheterize him under an anesthetic. He came near dying under the anesthetic. His condition did not look good to me, and I doubted if he would live very long. Having seen the beneficial results of electrotherapy in this case, I think if I had hypertrophy of the prostates I should prefer a course of electrotherapy before submitting to an operation.

DR. S. C. BARROW, Shreveport: I have had the opportunity of treating a number of cases of enlarged prostate. There are various conditions in the prostate. We have two types, ordinarily, the parenchymatous and the interstitial types of prostatitis. I believe that in a large percentage of cases of interstitial inflammation of the prostate gland, where a good surgeon can be reached and called, these patients should be operated upon; but I believe in 99 per cent of the cases of parenchymatous inflammation of the prostate, where the condition is simply one of hyperemia, an overgrowth of the cellular tissue of the prostate gland, it is criminal to subject a man to a capital operation.

Some time ago I had a physician bring his father to me, an

elderly gentleman, with chronic prostatitis. He said to me, "Do you think electrotherapy will do him any good?" I asked him what he thought of the surgical treatment of these cases, and he answered, "He is my father, and naturally I do not want him to undergo a surgical operation." I think it would be very fortunate for many of our patients if we viewed them from that conscientious standpoint, the same as we do members of our own family. The essayist says he has treated seventeen cases, with three deaths. Now, if a man kills twenty out of every hundred through the removal of the prostate, I believe we should institute other methods of treatment before subjecting any man to the hazard of a capital operation. In the hands of some men, who have had a large experience, it is all right; but when we remember that these operations are done by surgeons throughout the country, the mortality statistics are very much higher than are reported. The treatment for prostatic hypertrophy should always be conservative at first, and I want to sound a note of warning along that line and advocate conservative measures before subjecting old men to a capital operation.

DR. NELKEN (closing): In reply to Dr. Willis, I have never operated upon patients who have chronic prostatitis. Young has reported several such cases on which he has operated successfully. I am inclined to try every therapeutic measure before subjecting a young man to removal of the prostate.

In answer to some of the criticisms that have been made, I cannot do better than to quote the remarks of one man who, in discussing this subject at a medical meeting, stated that he did not believe in the removal of the prostate, because he had operated on twenty-one cases and had eighteen deaths. I take it, very few men would believe in prostatectomy if he were the operator.

In analysing the statistics of prostatectomies, we must not lose sight of the fact that many deaths are credited to the operation which should be charged up to the disease. A large proportion of cases in which death follows the operation, die, not as a result of the operation, but in spite of it. The patients have waited until grave pathological changes have occurred in vital organs, and death is due, not to the operation, but to organic disease. At the worst, all that can be said is that the operation hastened the fatal termination by a few days, or, at most, by a few weeks.

DR. CHARLES CHASSAIGNAC, New Orleans, read a paper entitled

The Office Treatment of Rectal Diseases.

SYNOPSIS.

Most of you know that when a patient is sent to a physician who is paying special attention to rectal diseases, the idea is always that he is to be operated on. We know that the quacks foster this idea in their literature and advertisements. We know equally well that the average patient is very much disinclined to have any surgical operation performed, so that frequently this idea of being sent to a surgeon or to a specialist in rectal troubles, which may mean operation, will deter many a patient from getting the proper care, and perhaps avoiding a surgical operation so-called.

Without going into the question of palliation at all, which would make us go over too much of the subject, I would like to use as an illustration of what I mean the fact that we hear a great deal about office treatment and what can be done in cases of hemorrhoids. It must be well understood at the outset, however, that I do not mean to say that we can be prepared at all times to treat hemorrhoids in the way I shall describe. A certain proportion of cases are such that, if we wish to do justice to them, we can consider nothing else but a well-devised and carefully-carried out surgical operation. But just as we must, on the one hand, dispose of some of these cases by operation, and, on the other hand, taking the other extreme, we can relieve a great number with palliative treatment, there are many types of cases between the two which **we can dispose of in the office.** If among ourselves we want to be frank, we would have to consider their treatment as a surgical one, after all. There would be several slight operations, instead of one operation. I shall describe a method which will be very useful to any of us when we come across the right sort of conditions and in the kind of patient who declares he does not want to be operated on. We know that some patients introduce the subject in that way. They announce their own diagnosis, or the diagnosis of the family physician, and say, "I want you to treat me, but I don't want to be operated on." Many of these we can relieve by office treatment. Those who want to be captious may say that, instead of performing one operation, we perform several. Nevertheless, a patient usually does

not consider it an operation if he can come to the office and have some treatment—surgical treatment—done from time to time, and is not confined to a hospital, and does not lose any time from his work. He does not consider the fact that we have performed several operations instead of one.

An important point in all of this surgical work, performed in the office, depends upon being able to secure prompt and sufficient analgesia, and I have found that a combination which is used in different proportions, especially by oculists, serves very well for this purpose. I use equal parts of a one per cent. solution of cocain, of a 1-to-1000 solution of adrenalin chlorid, and of normal salt solution, which, you see, will make a very mild cocain solution, really a third of one per cent., because you have the three substances in equal parts. It makes a 1 to 3000 of adrenalin chlorid, the rest being salt solution. I selected this after trying a good many different proportions and other combinations, because this is sufficient to produce pronounced analgesia on the one hand, and, on the other hand it can be used to quite a reasonable extent without any fear of toxic effect. The adrenalin increases the local effect of the cocain on the one hand and diminishes the chances of any large amount of absorption through the constricting effect on the blood vessels so that you can easily have a syringe of twenty minims or even thirty and use that without fear of producing toxic effects because you are using very little cocain. By injecting this where you want to do the work you get the effect of the cocain and of the adrenalin, which limits bleeding, that might disturb your work, and, at the same time, you get the effect of mechanical distension by the fluid in the tissues.

With this, in a moderate case of hemorrhoids, I can outline briefly a method which I think you will find of service in patients who are not too badly affected to make it necessary to do a radical operation. Suppose the hemorrhoid is of medium size, if it can be brought down by the patient when at stool, as is often the case, he can attempt to have a stool at the office or allow the hemorrhoid to protrude after having had a stool previous to coming to the office. If that is not the case, with a fenestrated speculum you are able, through a moderate amount of dilatation gradually brought on, to get the hemorrhoid to protrude through either fenestrum of the speculum. The idea is then to inject a few minims of the analgesic

solution at about the center of the tumor, according to the size; sometimes two, three, maybe half a dozen minims will be enough to distend the tumor sufficiently to make it easily reachable and blanched, on account of the effect of the cocain and the adrenalin, so that you can easily grasp it, or a part of it, if it is too large, with a small rat-tooth forceps, and by means of the galvano-cautery slowly sear off the entire tumor, if it has a pedicle; or, if it has no pedicle, you can even sear it off piece by piece till you get to the level of the healthy mucous membrane. If a patient has a number of these tumors, on the one hand, or if, on the other hand, the tumor is too large to be disposed of in this manner at one sitting, then a section only of it may be removed at one sitting.

If you are careful with the galvano-cautery point to see that it is not heated too hot, and you have patience enough to sear rather slowly through the tissues, there will not be any danger of bleeding at the time or subsequently, nor will there be any chance of infection, because the tissues are closed long enough after the searing to prevent anything of that sort. It is, on a small scale, a modification of the clamp and cautery operation.

If the tumor is too large to remove at one sitting, then the best thing is to make an application of carbolated vaselin thoroughly to the parts and reduce them. I usually prefer to let a patient, after this, take one or two, or more, small doses of paregoric, enough to keep the bowels quiet for twenty-four or forty-eight hours, and follow this by a mild purgative. It is surprising to see how little patients feel this manipulation. They do not seem to suffer from the small operation. There is no pain following it, to any extent, and the patient avoids being laid up in a hospital or infirmary. This work can be done only in selected cases—that is, in tumors of moderate intensity, and those that have lasted a reasonable time.

I have used this merely as an illustration of numerous procedures that can be resorted to legitimately and safely, and with satisfactory results, thereby ridding patients of the dread of applying for treatment from the idea that a surgical operation must be performed. Of course, when it comes to the matter of suggesting a remedy, we ought not to do a thing that is not clearly indicated, simply because quacks promise something on the one hand, or the patient is afraid of something on the other. But there is a certain

proportion of cases we can treat in the manner described without sacrificing principle, while obtaining results to the satisfaction of the patient.

DR. J. M. BODENHEIMER, Shreveport, read a paper entitled

The Abortive Treatment of Acute Gonorrhea of the Male Urethra.

There was a time in the not far distant past when the profession was wont to approach the venereal infection almost entirely from the standpoint of morality. The licentious youth or roué who came to his physician as a result of midnight visits to the temple of Venus was either treated with levity or a moral sermon and the most careless medical attention—a bottle and a hand syringe with nauseating internal medication. But to-day the venereal infections have come to be recognized to be of as much within the field of the practitioner, to demand as much serious consideration as any of the acute or chronic ills to which human flesh is heir to. A tabulation of the fearful havoc wrought upon the young and the innocent, the high percentage of gynecological afflictions traced by our specialists, the great number of either impairment or entire loss of the special senses, especially the eyesight; the mental, moral and physical degeneration as a result of specific infection directly traceable to the results of illicit satisfaction of the instinct of procreation, have gradually awakened the profession to a high sense of duty which it owes to the race, and to-day the so-called clap-doctor is no longer looked down upon by his brother practitioners, but takes equal rank with them in the councils of the profession.

The study of these diseases has progressed in a thoroughly scientific way, and the person who presents himself to the thoroughly conscientious physician for treatment may be sure of the same attention as he would receive for an attack of malaria, typhoid, pneumonia or any other innocently acquired disease. And it is with this idea that I present for your consideration an advancement in the treatment of acute gonorrhea of the male urethra.

The idea has for a long time gained credence among the laity, backed by the opinion of some of the profession, that it was dan-

gerous to attempt to abort the course of gonorrhea. Cordee, strictures and infections of the deeper organs were thought to follow the course of such an attempt. This is now known to be fallacious, gonorrhea of long standing being far more injurious to the urethra and deeper connecting organs than any attempt towards abortion of the infection. It is true that before the introduction of the non-irritating salts of silver a solution strong enough to destroy the gonococci would no doubt do serious damage to the delicate mucous lining the urethra, but practical demonstrations have been convincing to the unprejudiced mind that very strong solutions of the organic salts of silver might be used with absolute destruction to the specific course of infection without impairment of the tissue structure.

In November, 1909, E. G. Ballenger, of Atlanta, published an article in the *Therapeutic Gazette* on "A Method of Curing Quickly Beginning Gonorrhea by Sealing Argyrol in the Urethra." Previous to this, various attempts had been made towards the abortive treatment of this disease. Hume, of New Orleans, has described a treatment with solutions of varying strength of silver nitrate held in the urethra by closing the meatus with the fingers for one, two, and three minutes. While this treatment has no doubt proven efficacious in aborting gonorrhea, still a very disastrous result, balanitis, etc., with the concomitant suffering, led me to abandon this method very early. Argyrol in strong solutions, when freshly prepared (mark you, I say *freshly* prepared), seems to possess the gratifying properties of acting (contrary to laboratory experiment) as a gonococcide in acute cases without tissue destruction. Of course, it is not claimed that all cases of gonorrhea are cured by its use, but a sufficient number of successful results warrants its trial in all cases. Even if the cure is not effected by a few treatments, you have done no injury to the urethra, nor have you retarded the final results, but, on the contrary, the discharge is lessened and the patient is thereby the more encouraged.

The method of Ballenger is as follows: The glans penis and prepuce are well washed with soap and water. The patient then reclines upon an operating table or chair and a clean towel is placed around the penis to protect the clothing. A piece of cotton saturated with 10 per cent cocain solution is placed on the meatus for a few minutes to prevent the pain following the application of collodion.

About twenty drops of 5 to 8 per cent argyrol are injected into the urethra with a blunt-pointed syringe. The thumb and forefingers holding the end of the penis, the syringe is withdrawn and the meatus closed by pressing the lips together. The parts are then dried and a small amount of collodion is applied over the meatus as its sides are pressed together. The patient is instructed not to remove the collodion until it is necessary to urinate. Two treatments are recommended daily for two or three days, and one treatment daily for one or more days, according to the condition. I have departed somewhat from the original idea. I first examine the discharge under the microscope, and if no cells from the deeper layers of the mucous membrane are present, or, better still, if the discharge is less than forty-eight hours old, showing an absence of deep infiltration, I am assured of success. The anterior urethra is irrigated with a large quantity of warm sterile water or a solution of bicarbonate of soda, the bladder being previously emptied. A half drachm of 20 per cent solution of argyrol is injected into the urethra, the meatus is sealed with collodion, and a small piece of cotton or by means of small adhesive strips. The patient is instructed to retain the solution for two hours, or longer if possible. Four hours after the first treatment, a second treatment is made with solution of argyrol of the same strength. The next morning, in a majority of cases that are aborted, there is only a thin mucous discharge, which may or may not contain gonococci. For safety, a 10 per cent solution is now injected. After the third treatment, if the gonococci can still be demonstrated in the secretion from the urethra, it is useless to continue the same treatment. If the gonococci cannot be demonstrated, you may feel assured that you have accomplished your purpose, although a slight mucoid secretion may continue. It is best to leave that alone, as continued treatment may produce irritation, and if left alone the discharge will cease of its own accord. Sometimes, to satisfy the patient, a mild bicarbonate irrigation of the anterior urethra can do no harm.

I have treated thirty-four cases by this method. Two cases were given only one injection, with prompt results; the remainder were given two and three. I have experienced untoward effects in only two cases. The one had been previously treated by this method successfully about eight months previously. The second time that

he presented himself for treatment he suffered from retention of urine, which necessitated catheterization, which was followed by a posterior urethritis, requiring a number of weeks of treatment. The other case presented himself with a history of thirty-six hours' discharge; gonococci intracellular and cells of the deeper structure of the mucous membrane present. No gonococci demonstrated after two treatments; no secretion after the fourth day; developed orchitis on fifth day. Subsequent history developed the fact that the case was an exacerbation of an old chronic condition.

In a personal communication from Dr. Ballenger, he reports 325 successfully-treated cases by his method, which, with my own experiences and those of colleagues, demonstrates to my mind beyond a question of a doubt that the method is at least worthy of a trial in all acute gonorrheas of the male urethra.

DISCUSSION OF PAPER BY DR. BODENHEIMER.

DR. A. NELKEN, New Orleans: It is a peculiar fact that all the so-called disinfectants, active in the laboratory, prove valueless for use on the human body. It has been demonstrated that there is something in the blood serum which counteracts their effects. If we are to believe the reports, a single exception seems to be argyrol. I have long been interested in this subject, and some years ago wrote the manufacturers, asking them on what they base claims that argyrol was an antiseptic, and yet did not affect the body cells. It seemed to me that any drug acting on protoplasm would affect the body cells as well as the infecting organism. They wrote me that they had no laboratory reports to make, but a great volume of clinical experience proved their contention. But since that time there have been laboratory experiments made, and we have the report of the committee appointed by the British Medical Association, and the conclusion reached was that argyrol and collargol, and similar non-irritating silver salts, whether used in old or fresh solutions, were absolutely valueless as antiseptics. Following that, we had the work of Derby, of Boston, and numerous others, confirming the work of the British committee, all agreeing that argyrol was without any disinfectant or antiseptic value. Dr. Duval, of New Orleans, experimented with argyrol. He flushed a culture

of gonococci with 10 per cent argyrol, and after twenty-four hours got a growth of gonococci. And yet we are asked to believe that the drug is able to destroy the gonococcus in the human body. My personal experience with argyrol has been unsatisfactory. I have never been able to confirm Dr. Bodenheimer's results, and have almost entirely discarded argyrol in the treatment of gonorrhea.

The subject is interesting, and I should like to have some one tell us how argyrol does the things claimed for it, in the hands of some men, and is so useless in the hands of others. I am anxious to have some one explain why this preparation can perform the wonders claimed for it in the urethra, and never duplicate them under the highly favorable conditions that surround its use in the laboratory.

DR. BODENHEIMER (closing): In answer to Dr. Nelken regarding the germicidal power of argyrol, I do not wish to decry the scientific methods at all, and, as I stated in my paper, contrary to laboratory experiments, argyrol acted as a gonococcide. Why it does it, I do not know, but I know it does. It was a long time before we knew that quinin was a specific in malaria, and even now the method of destruction is speculative.

I am sorry that several of my colleagues here in Shreveport are not present, so that they could substantiate what I have said. Drs. W. W. Smith, M. F. Smith, Loyd and Hendricks have used this method of sealing argyrol in the urethra in the acute cases of gonorrhea, and they have met with success; and surely with that preponderance of clinical evidence and testimony the treatment, as I said before, is worthy of trial.

Orleans Parish Medical Society Proceedings.

President, DR. B. A. LEDBETTER.

Secretary, DR. L. R. DeBUYS.

141 Elk Place, New Orleans.

In Charge of the Publication Committee, DR. L. R. DeBUYS, Chairman.

DR. HOMER DUPUY and DR. W. H. BLOCK.

DISCUSSION OF DR. WELLMAN'S PAPER ON "THE NEW ORLEANS SCHOOL OF TROPICAL MEDICINE."

DR. E. M. DUPAQUIER: Mr. President and Gentlemen—If the great French philosopher, Descartes, had been with us this evening to hear Dr. Wellman's paper, he would have been delighted, for, like all other great philosophers, he worked for the happiness and healthfulness of mankind, and he is the one who said, three centuries ago, "If it be possible to ennoble mankind, it will be through medicine." (See Warbasse's Medical Sociology.)

Descartes would have been delighted to hear of the vital results obtained by the elevating spirit of hygiene, preventive medicine, modern sanitation, which, all three, compose the most advanced branch of medicine in our days.

But I shall turn my attention to that part of Dr. Wellman's paper which considers in particular the New Orleans School of Tropical Medicine, or, rather, that part of his Tulane Department of Hygiene, Preventive Medicine and Special Course in Tropical Diseases, which are all three inseparable and spell *Modern Medicine*. The establishing of a school of tropical medicine here is practical, but if we wish to see our plan, our dream, realized, we must build it up on a solid foundation, not on flimsy advertisement. As a sincere friend, an earnest supporter, I have something to say for the good of the project. It is quite natural that those of us who have had to deal with *local* practicabilities more than with theories, should be the interpreters of this Society's ideas on the matter. The vice-chairman of the Committee on Scientific Essays, Dr. Howard King, has asked me to discuss this matter, because he knows I have seen, from very close, our deficiencies, our de-

siderata, in the practical teaching of tropical medicine, as I was the first one—had the luck to be the first one—who taught tropical medicine officially here, under very serious handicaps, so I know whereof I speak.

No one here is more interested in the development of the New Orleans School of Tropical Medicine than myself, and I delight to say, from close acquaintance with the head of the school, Dr. Wellman has the scientific and practical requisites for the final object in view, namely: the building up of the New Orleans School of Tropical Medicine. Somewhat late in the race, we can hardly hope to ever get ahead of some other schools, unless we find out—how and where they are deficient. No one dreams of ever outdiong all others in practical laboratory or research work in tropical Africa, Asia, America, nor possibly in clinical work in *all* other schools; but I know that in clinical work we can do better than many other schools, *if we go at it in the proper way*. I know that if the schools at Ceylon, Cairo, Karthoum, for instance, may command as much clinical work as practical laboratory and research work, such schools as those in London, Liverpool, Hamburg, Paris and Marseilles are lacking material for clinical work, and I know this through Dr. Seemann's experience in Liverpool. The clinical section of our teaching and work should be pushed to a high plane, just as Castellani, the director of the Clinique for Tropical Diseases in Ceylon, does, and such a clinical instruction would place our school foremost in the ranks of tropical schools, in time. If we intend to attract students here, and turn out practitioners fit to work and to practice in the tropics, we must not only give importance to laboratory instruction, but give importance also to the demonstration of clinical manifestations and of treatment at the bedside, various dosage and modes of administration, which the British Colonial Office does not consider superfluous at all. Just for instance, is it not preposterous to think of grasping the inexhaustibly possible clinical manifestation of malaria only, and its various clinical therapeutic manifestations, in grossly limiting one's clinical knowledge to two or three types of intermittent fever and one's therapy to a five-grain capsule of quinin every three hours, stating to one's self that, as far as "Blackwater fever" is concerned, experts were passing, yet, and did not know much yet, so "I'll set it aside?"

This is enough to give a severe shock to any one who has read the sixty original clinical observations of Laveran, in his original genial work, now so famous, and famous forever, "*Traité des Fièvres palustres*," 1884.

The *foundation* for the clinical work I am dreaming of for our school is a well-organized, well-equipped hospital. We have the hospital and we have the clinical material, as you well know, but we have not *any modern system* at all in our hospital, as you well know. To demonstrate the clinical opportunities we have here in transients from afar, and at the same time our unpreparedness to profit by it, I wish to relate to you the following short story: Dr. Wellman and I were very near becoming famous in the history of tropical medicine, for we had an imported case of Kala-azar in an East Indian youth, just as sure as a clinical picture could show it, and this would have been the first case reported in America. We combined our efforts towards getting at the function of the spleen and liver, expecting to find Leishman's bodies, when, for all our work, we got rewarded by an Indian thug's "*threat of death*" from the patient's father if we dared hurt his boy, the patient being actually taken from our hands and removed from the Presbyterian Hospital, where we had sent him, just about one hour after he had been there, just before we had a chance to puncture him for a blood examination. Probably Dr. Wellman, like myself, is delighted to be alive yet, to bless that fool with the usual expressive epithet, but we are certainly sore over the loss of such a splendid opportunity to properly advertise to the world the tropical material found here in transients. This is cited, among other practical instances I know, out of my personal experience with yellow fever here, to demonstrate the loss of clinical work based on practical laboratory work, from the lack of a well-organized hospital service, where enforcement of what must be done for everybody's sake could be carried out without a hitch from autocratic official standpatters or from the whims of dictating, ignorant and foolish patients; with discipline, enforcement, equipment, system in our New Orleans Charity Hospital, the New Orleans School of Tropical Medicine, as well as all branches of medicine, must attract attention abroad, not for the practical laboratory and research work, which can be gotten in other places as well, but for the fine clinical hospital

work the material offers, with the aim sought in details of advancing practical treatment.

Gentlemen, in closing my remarks, I wish to throw a bouquet of very bright flowers to the editors of our neat official journal, Drs. Chassaingnac and Dyer, for their courage and foresight in writing such a fine editorial about the hospital in this month's issue, and I do so with the profound hope that they will continue a clever campaign in hospital improvements, for the Charity Hospital of New Orleans must be the foundation, the *sheet anchor*, for the teaching of tropical medicine, as well as the other branches of medicine.

DR. WELLMAN (closing): I thank this Society for the interest evinced in this subject, and can say that we at Tulane have always felt that this Society and the profession of New Orleans and the South were the best friends of such a department or school as is proposed in my address. In this we are fortunate, for, with your co-operation and sympathy, we are encouraged to go on; without it we could not but fail in our hopes and plans.

EDITORIAL NOTE.

Presidency of the American Dermatological Association.

As we go to press we are informed that our Dr. Isadore Dyer has been honored with the presidency of the American Dermatological Association. The distinction is of sufficient importance to justify his co-editor in announcing it in this form.

The writings of Dr. Dyer on dermatological subjects, his teaching on the subject, his research work, especially on leprosy, his active interest in the labors of the association—all have contributed to make him deserve richly the distinguished honor now conferred upon him by his colleagues.

We may well be pardoned in thus giving expression to our pleasure and congratulations to Dr. Dyer, in which we are sure the profession of this city and State will proudly share.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

Public Health and Preventive Medicine in the South.

Even at the meetings of the American Medical Association, a few years ago, the attendance at the Section on Public Health was exceedingly limited. To-day questions in preventive medicine are paramount and all over the country agitation of methods and their application find place.

This is as true in the South as in any other section and in most of the State associations large place is given to the section on public health, sanitation and preventive medicine. The Southern Medical Association has a special Section on Hygiene and Preventive Medicine, and much good is hoped from its organization and work.

With the general agitation of health questions the scope of interest on the part of the medical profession must grow into a broader and broader influence, and only organization can effectively produce such results.

Already the States of Louisiana, Texas and Mississippi have begun the education of the public and the work of the hookworm commissions in the other States has stimulated an interest which may bear fruit. Until every physician, however, constitutes himself an educator in preventive medicine, and hygiene, the work must be slow to progress.

The new era is advancing, and the public itself has a viewpoint quite different from what obtained a few years ago. With more breadth of intelligence in health matters, more progress is in sight.

The State Society Meeting.

The annual meeting of the State Society proved a great success, scientifically and socially, and the profession of the State were much complimented by the visit and contributions of the distinguished visitors, Drs. Adami, of Montreal; Edsall, of St. Louis; Carl Beck, of Chicago; T. S. Cullen, of Baltimore, and Capt. Craig, of the Army, with the Secretary of the A. M. A., Dr. Alex. Craig, also in attendance.

The country members in large numbers were prevented in their attendance, on account of the river conditions, but, notwithstanding, the record of registration was creditable. In every division of the program the papers and discussions were of high order and the meeting altogether was profitable to all who attended.

The selection of Baton Rouge as the next meeting place is especially felicitous, as the Society has not met in the Capital for some years.

The Charity Hospital Again.

Since our last reference to the Charity Hospital of New Orleans much has eventuated of importance and satisfies the JOURNAL that the profession is alive to the need of developing such public interest in the Hospital that the result may be a reorganization for more efficiency in the medical services of the institution.

The State Medical Society adopted resolutions urging the investigation of hospital conditions with a view to a proper reorganization and ordered the appointment of a committee to further those ends.

The Orleans Parish Medical Society subsequently adopted resolutions endorsing the action of the State Society and ordered the appointment of a committee to confer with the Committee of the State Society and otherwise to further the end arrived at. The members of the Orleans Parish Medical Society further declared, in formal resolutions, which were ordered published, that the members of the Society opposed any movement which would displace the Sisters of Charity at the Hospital.

The Visiting Staff of the Charity Hospital adopted a set of resolutions reviewing the failure of the effort of their Conference

Committee to obtain any recognition from the existing Board of Administrators and urging the correction of existing conditions at the Hospital.

The resolutions were ordered transmitted to the Governor-Elect (Luther E. Hall) and were also ordered published in the daily press.

The attitude of the New Orleans daily press in the matter of the Charity Hospital has been for the most part consistent, recognizing the essential principle that so large an unrest among those most interested in the administration should mean both investigation and reform. One of the daily papers became hysterical and uttered several editorials which away from New Orleans might create the impression that the medical profession in this State were either pirates or clandestine associate members of the Mafia, waiting to pounce upon the Charity Hospital as plunder.

The solution of the situation points to an adjustment of conditions, provided all concerned are sane in their consideration of the matter.

The Charity Hospital of New Orleans should be a first-class institution, and we are not prepared to defend it in that position at this time. Most of our readers in Louisiana and the neighboring States have lived in the environment of the Hospital and its traditions too long to wish to see any harm come to its administration, but most of our readers are more than interested in seeing that the Governor of Louisiana will be thorough in his study of the needs of the New Orleans Charity Hospital to the end that all concerned in its welfare may praise his discernment and wisdom in so determining a Board of Administrators that a result may eventuate which will make of the local institution a first-class Hospital, under modern methods of administration in all of the surgical and medical services and in all particulars related to the care of the sick.

Louisiana State Medical Society Notes.

In Charge of DR. JOSEPH D. MARTIN, Secretary, New Orleans.

SYNOPSIS OF THIRTY-THIRD ANNUAL MEETING.

HELD AT NEW ORLEANS, APRIL 23, 24, 25, 1912.

The Thirty-Third Annual Meeting of the Louisiana State Medical Society was eminently successful, both from a point of attendance and the number and excellency of the papers read. The registered attendance was 414. Of this number, 122 came from the country parishes, 246 registered from New Orleans and 46 guests were entertained. Among those invited to the meeting and who read elaborate and interesting papers were Drs. J. George Adami, of Montreal; Thomas S. Cullen, of Baltimore; David L. Edsall, of St. Louis; Charles F. Craig, of Washington; Carl Beck, of Chicago; Alexander R. Craig, Secretary American Medical Association, of Chicago; Hon. Robert Knox, of Lake Charles.

FIRST DAY, TUESDAY, APRIL 23.

The meeting was opened at Hutchinson Memorial by Dr. R. O. Simmons, of Alexandria, President, at 10:10 a. m.

Dr. E. H. Walet, President of the Orleans Parish Medical Society, delivered the address of welcome on behalf of said Society.

At the morning session papers were read by Drs. G. C. Chandler, John L. Scales and S. C. Barrow, of Shreveport, and Drs. E. C. Samuels, Adolph Henriques, Otto Joachim, C. A. Bahn, M. Feingold and D. Fred Waide, of New Orleans.

After the conclusion of the morning session luncheon was served by the New Orleans Polyclinic, complimentary to the members and the guests of the Society, at the Polyclinic Building.

The visiting ladies were entertained by the Ladies' Entertainment Committee at a luncheon at the Country Club, followed by an automobile ride.

At the afternoon session papers were read by Drs. Solon G. Wilson, L. R. De Buys, M. S. Picard, Robert A. Strong, J. T. Halsey, Sidney K. Simon, E. M. Dupaquier, P. A. McIlhenny, of New Orleans, and Dr. L. L. Kelly, of Melrose.

At the night session papers were read by Drs. Allan Eustis, George S. Bel, Joseph Hume, Isaac Ivan Lemann, J. B. Guthrie, F. E. Lamothe and J. A. Storck, New Orleans, and Dr. Leon J. Menville, of Houma.

At the conclusion of Dr. Bel's paper, which was on "Hospital Management," it was moved and seconded that a Committee be appointed by the President to draft resolutions to be presented to the coming General Assembly, looking to the betterment of hospital conditions.

Moved, as a substitute, that the matter be referred to the House of Delegates. Substitute carried.

SECOND DAY, TUESDAY, APRIL 24.

The Society met at 9 a. m., and was called to order by President Simmons.

Papers were read by Drs. E. Denegre Martin, A. C. King, W. D. Phillips, William Kohlmann, S. M. D. Clark, C. Jeff Miller, H. W. Kostmayer, Maurice J. Gelpi, P. B. Salatich, A. Nelken, S. P. Delaup, of New Orleans, and Drs. Espy M. Williams, of Patterson, and S. L. Williams, of Shreveport.

After the adjournment of the afternoon session a complimentary luncheon was served by the Medical Faculty of Tulane University at the College Refectory on the Tulane Campus.

The afternoon session was held at the Richardson Chemistry Building, Tulane Campus.

Dr. J. George Adami, of Montreal, read a paper entitled "Sensation and Pain."

Dr. David L. Edsall, of St. Louis, read a paper entitled "Studies in Respiration."

Papers were read by Dr. W. H. Harris, O. L. Pothier, Sidney D. Porter, J. George Dempsey, New Orleans, and Dr. George B. Adams, Pineville.

Dr. Charles F. Craig, Captain Medical Corps, U. S. Army, Washington, D. C., read on "The Parasitic Amebæ and Their Relation to Disease."

Hon. Robert Knox, of Lake Charles, contributed a paper on "The Doctor in Court."

There was no scientific session Wednesday night. The ladies were entertained at a musicale in the Gold Room of the Hotel Grunewald, and the members were given a smoker on roof garden of the

hotel. The hosts were members of the Orleans Parish Medical Society.

Dr. Alexander R. Craig, Secretary American Medical Association, delivered an interesting talk at the smoker on "The Organization of the Medical Profession of America."

THIRD DAY, THURSDAY, APRIL 25.

Meeting called to order by the President at 9:45 a. m.

Dr. Thomas S. Cullen, of Baltimore, read a paper entitled "Diseases of the Umbilicus Apart from Hernia," illustrated by lantern slides.

Dr. Carl Beck, of Chicago, read a paper entitled "Causes and Treatment of Chronic Diseases of the Bones," illustrated by lantern slides.

A paper was also read by Dr. W. T. Richards, New Orleans.

After the morning session a complimentary luncheon was served by the Board of Managers of Touro Infirmary at said institution.

At the afternoon session papers were read by Drs. L. R. De Buys and L. L. Cazenavette, New Orleans, and Dr. J. N. Thomas, of Pineville.

Dr. L. R. De Buys, Secretary of the House of Delegates, read a synopsis of the proceedings of said body, of which the following is a summary:

The House of Delegates held four sessions, the first on Monday, April 22, at 4 p. m., and subsequent sessions on Tuesday, April 23, at 10:30 a. m.; Wednesday, April 24, at 10:30 a. m., and Thursday, April 25, at 9 a. m.

The following business was transacted:

The reports of the Councillors, Officers and Standing Committees were read and approved. (These will be published seriatim in subsequent issues of the JOURNAL, under the head of "Louisiana State Medical Society Notes.")

The following resolutions were adopted:

Amending Section 1 of Chapter 9 of the By-Laws, increasing the dues from three dollars to four dollars per year. One dollar of this amount is to go to the entertainment fund for the Annual Meetings.

Resolutions endorsing the work of Dr. Oscar Dowling, President, and also members of the Louisiana State Board of Health.

Resolutions offered upon the request of the Louisiana State

Medical Society relative to the advisability of considering plans for the betterment of existing conditions at the Charity Hospital.

Resolutions of thanks were also offered to the citizens, especially the ladies, of New Orleans, New Orleans Polyclinic, Tulane University, Orleans Parish Medical Society, Touro Infirmary, the visiting readers of papers, and the press and all others contributing to the entertainment of our Society.

Resolutions relative to repealing the law requiring physicians to pay a privilege tax.

Attention was called to the financial vicissitudes of the Louisiana State Board of Medical Examiners.

It was decided not to change the Congressional Districts at this meeting.

Motions were made:

That a committee composed of members of the Society consider the matter of the adoption of the proposed card system.

The House of Delegates endorsed the proposed amendment of Sections 5 and 11, regulating the practice of medicine in Louisiana.

The following officers were elected:

President, Dr. B. A. Ledbetter, New Orleans.

First Vice-President, Dr. G. C. Chandler, Shreveport.

Second Vice-President, Dr. George S. Bel, New Orleans.

Third Vice-President, Dr. J. L. Adams, Monroe.

Secretary, Dr. Joseph D. Martin, New Orleans.

Assistant Secretary, Mr. George Augustin, New Orleans.

Treasurer, Dr. M. J. Gelpi, New Orleans.

Councillors—First Congressional District, Dr. W. H. Seemann, New Orleans; Second Congressional District, Dr. H. B. Gessner, New Orleans; Third Congressional District, Dr. H. L. Ducrocq, Lafayette (held over); Fourth Congressional District, Dr. Randell Hunt, Shreveport (held over); Fifth Congressional District, Dr. R. W. Faulk, Monroe; Sixth Congressional District, Dr. L. G. Stirling, Baton Rouge (held over); Seventh Congressional District, Dr. L. Lazaro, Washington (held over).

Delegate to American Medical Association, Dr. Charles Chas-saignac, New Orleans; Alternate, Dr. J. D. Martin, New Orleans.

Chairman House of Delegates, Dr. J. C. Edwards, Abbeville.

Secretary House of Delegates, Dr. L. R. De Buys, New Orleans.

Names to be recommended to the Governor for vacancies on the

Board of Medical Examiners, Drs. S. L. White, Ruston, and T. P. Lloyd, Shreveport.

Next place of meeting, Baton Rouge, April 22, 23 and 24, 1913.

CHAILLÉ MEMORIAL NIGHT.

The last night of the 1912 session was devoted to the memory of Dr. Stanford E. Chaillé and the following program was followed:

Address of the President of the Louisiana State Medical Society, Dr. R. O. Simmons.

Address for the State Society, by Dr. F. W. Parham, New Orleans.

Address by Mr. George Denegre.

Report on Chaillé Memorial Fund, by Dr. A. L. Metz.

Formal presentation was made of the Chaillé Memorial Bust, from the Teaching Staff of the Medical Department, to the Department, in the address of Dr. Rudolph Matas.

CLINICAL MEETINGS.

Clinical meetings were held on Friday in the Amphitheater of the Charity Hospital, in which Drs. Cullen, Beck and Edsall participated. In the afternoon demonstrations of gross specimens and microscopical slides were given at the Laboratory of Tropical Medicine, Hutchinson, by Prof. Creighton Wellman and assistants. Clinics were also held by Prof. Rudolph Matas at Touro Infirmary.

On Saturday, April 27, clinics were held at the Charity Hospital, Presbyterian Hospital, Touro Infirmary and the Eye, Ear, Nose and Throat Hospital.

The 1912 meeting was one of the most successful in the history of the Society, and much of its success was due to the energetic efforts of the Committee on Arrangements of the Orleans Parish Medical Society, of which Dr. M. Couret was Chairman, and the following were sub-chairmen: Finance, Dr. B. A. Ledbetter; Transportation, Dr. W. H. Seemann; Hotels, Dr. John Callan; Halls and Meeting Places, Dr. W. W. Butterworth; Exhibits, Dr. P. T. Talbot; Advertisements, Dr. Joseph Levy; Registration, Dr. G. Farrar Patton; Badges, Dr. O. L. Pothier; Reception, Dr. Homer Dupuy; "Stunts," Dr. Lucian H. Landry; Guests, Dr. Isadore Dyer; Clinical Meetings, Dr. Allen Eustis; Chaillé Memorial, Dr. Ernest S. Lewis; Ladies' Entertainment, Mrs. F. W. Parham.

JOSEPH D. MARTIN, M. D.,

Secretary.

Medical News Items.

MEETING OF THE TEXAS STATE MEDICAL ASSOCIATION.—The Texas State Medical Association met at Waco on May 7, 8 and 9, 1912, with some 800 members present, under the presidency of Dr. J. H. McCracken, of Mineral Wells. The Association was well organized in section meetings, and the papers read were of high class. Dr. George W. Crile, of Cleveland, Ohio, presented a paper on a new principle in operative surgery which he called "Anoci-Association." Dr. Isadore Dyer, of New Orleans, was also a guest of the Association, and read a paper on "Hygiene and Preventive Medicine in the South." The social features of the meeting included a reception on the roof of the Amicable Building on the first day of the meeting, and a reception and ball at the Huaco Club on the night of the second day. The following officers were elected for the coming year:

President, Dr. John S. Turner, Dallas; Vice-Presidents, Dr. J. W. Overton, Sweetwater; Dr. O. L. Norsworthy, Houston; Dr. J. B. McKnight, Brady. Several District Councillors were also chosen, some of them succeeding themselves, as follows: Dr. W. E. Sturgis, San Angelo; Dr. F. P. Miller, El Paso; Dr. S. C. Parsons, San Angelo; Dr. Albert Woldert, Tyler; Dr. J. H. Ball, Crystal Falls.

THE THIRTY-SIXTH ANNUAL MEETING OF THE ARKANSAS MEDICAL SOCIETY was held at Hot Springs, Arkansas, May 13 to 16, 1912, under the presidency of Dr. Morgan Smith, of Little Rock. Dr. W. A. Evans, of Chicago, delivered a stirring address before a large audience on the evening of the first night of the meeting, using as his text "The Public Health," but covering the relation of the citizen to all questions concerned. He made an appeal for the Owen bill, and emphasized the importance of overcoming the impressions created by the anarchistic organization known as the National League for Medical Freedom.

IMPORTANT PROGRESS IN TROPICAL MEDICINE.—Dr. R. E. Swigart, the General Superintendent of the Medical Services of the United Fruit Company, has recently announced that it is the purpose of this corporation to improve its hospital facilities in Central America and in the Islands of the Caribbean Sea. Of

particular importance to Louisiana and the South is the announcement that the whole medical service of the United Fruit Company will co-operate with the Department of Tropical Medicine and Hygiene of Tulane University with a view to not only improving the hospital services, but to affording valuable material for the work in the Department of Tropical Medicine.

THE SOUTHERN SOCIOLOGICAL CONGRESS.—A large gathering interested in sociological questions met at Nashville, Tennessee, May 7 to 10, 1912. While the chief topics under consideration were related to child welfare, the sessions concerned also the status of prison administration, care of the insane and many questions related to public health, particularly referring to tuberculosis, the status of the negro, etc.

THE AMERICAN DERMATOLOGICAL ASSOCIATION met at the Barnard Free Skin and Cancer Hospital, St. Louis, Missouri, on May 23 to 25, 1912. Prof. C. W. Duval, of Tulane, presented a paper on "The Present Status of the Leprosy Bacilli."

ANOTHER NATIONAL PELLAGRA CONFERENCE.—October 2 and 3, 1912, has been chosen for the meeting of the National Pellagra Congress at Columbia, South Carolina, and an interesting meeting is promised.

THE AMERICAN MEDICAL EDITORS' ASSOCIATION will meet on June 1 and 3, 1912, at the Marlborough-Blenheim Hotel, Atlantic City, New Jersey. A number of interesting papers have been promised.

TWO SANITARIUMS FOR CONSUMPTIVES.—At the coming session of the Louisiana Legislature, the Louisiana Anti-Tuberculosis League will make strenuous efforts to have that body authorize the establishment of two sanitariums for consumptive patients, to be placed in different parts of the State, occupying not less than 100 acres each. Ample appropriation to start the work will be asked. It is proposed that the State Board of Health have control of the establishments and that parish medical officers do the work. The bill will provide for a Tuberculosis Commission consisting of the Governor as chairman ex-officio and the Attorney General, as well as the President of the said State Board. The institutions will be open to any indigent persons suffering from pulmonary consump-

tion, provided he or she is a bona fide resident of Louisiana and procures a registered physician's certificate.

GUARDING AGAINST DISEASE.—To prevent the introduction of bubonic plague, yellow fever and other contagious diseases in the United States from Mexico, Surgeon General Blue, of the Public Health and Marine Hospital Service, has detailed Assistant Surgeon J. A. Campbell to supervise the departure of vessels from Vera Cruz to this country, and Assistant Surgeon C. Milo Brady to perform a similar duty at Tampico. These officers will report upon the sanitary conditions of the ports, especially with regard to yellow fever and bubonic plague, sign bills of health with the American Consul, fumigate vessels in order to kill mosquitoes and rats upon them, and inspect passengers destined for American ports.

TULANE SENDS COMMISSION TO TROPICS TO STUDY MALARIA.—The Tulane Department of Tropical Medicine has sent its first scientific commission to the tropics to clear up obscure points in the causation or prevention of the more important tropical diseases. The head of the commission is Prof. Charles Cassedy Bass, who will be in charge of the investigations. The object of the expedition is to complete the experiments already begun by Prof. Bass, showing that the germ of malaria can be cultivated outside the body. Dr. Bass is accompanied by Dr. J. D. Weis, also of the Department of Tropical Medicine in Tulane, and Dr. Foster Johns, of the graduating class.

NEW YORK'S PLAN FOR HYGIENE CONGRESS.—The State of New York is preparing to participate to the fullest extent in the Fifteenth International Congress on Hygiene and Demography next fall. Governor Dix has extended the President's invitation to some fifty cities, which are all expected to send official delegates. In addition, the following were appointed by the Governor as a committee to assist in planning the State's participation: Dr. Henry L. K. Shaw, Albany, chairman; Dr. Jos. D. Bryant, New York City; Dr. Edward T. Devine, New York City; Eugene H. Porter, Albany; Dr. Luther H. Gulick, New York City. The sum of \$10,000 was appropriated by the Legislature to enable this committee properly to collect exhibits from the State under the charge of Mr. Chas. F. Storey. It is expected, also, that many

of the prominent institutions of learning and research in the State, including Columbia University, University of New York, College of the City of New York, Rockefeller Institute for Medical Research, Russell Sage Foundation and the National Civic Federation, will be represented at the Congress. The American Association for Labor Legislation is preparing an interesting and comprehensive exhibit on occupational diseases.—*Exchange*.

BOSTON PLANNING TO CURE "BLUES."—A hospital for the "blues," the first of its kind in the world, to to be conducted as a branch of the Boston State Hospital, on the theory that all insanity cases are simply forms of physical sickness which can be alleviated with proper treatment. To that end, the place will be a sort of clearing-house for those whose brains are out of gear. They will be differentiated and classified, according to the kinds of mental diseases they show, and remedies will be sought for each class of patients. There will be a department for dealing with incipient insanity, and it is expected that this branch of work will afford striking opportunities for the relief of many mildly insane persons without subjecting them to the stigma of insanity.—*Exchange*.

HEALTH COMMISSIONER SOUGHT FOR CITY OF BOSTON.—MAYOR INVITES APPLICATIONS FOR THE POSITION, IRRESPECTIVE OF RESIDENCE.—A vacancy will soon exist in the position of Chairman of the Board of Health of the City of Boston. The duties of the chairman and his two associates are various and responsible. They embrace the control of contagious diseases, including bacteriological tests, disinfection, and preventive measures; the inspection of milk, vinegar, provisions, tenements, slaughter-houses, stables and occupations and conditions dangerous to health; the medical inspection of the schools, containing more than 100,000 pupils; the management of a smallpox hospital and a quarantine station; the control of convenience stations throughout the city; the compilation and publication of vital statistics, and other miscellaneous duties. The department has over two hundred employees. The Mayor will consider applications from physicians, sanitary engineers or other persons experienced in this field, who are American citizens. The salary of the position is now \$4,500 per year, but the Mayor has recommended an increase to \$5,000, and is willing to recommend more. The appointment is made by the Mayor, subject to confirmation by the Civil Service Commission, and the new appointee will serve out two years of an unexpired term. The full term is three years. Applications should be addressed to Hon. John F. Fitzgerald, Mayor, Boston, Mass.

WORK OF THE CORONER'S OFFICE.—The Coroner of Cook County, Illinois, has recently issued two circular letters to physicians. The first deals with criminal abortion, in which the doctor is asked to notify the Coroner's office while the patient is still conscious, but

when death is impending, or when, on account of the patient's condition, this notification is inexpedient, to secure a needed ante-mortem declaration on the form prescribed; or, if in doubt as to what action to pursue, to advise with the Chairman of the Criminal Abortion Committee of the Chicago Medical Society, who will safeguard the interests of the physician inquiring. A second circular letter deals with the desirability of preventing the development of tetanus by the use of anti-tetanic serum. The records of the office show that from 1906 to 1911, inclusive, 157 verdicts of death from lockjaw were returned from the Coroner's Juries; two-thirds of these persons were treated in hospitals and one-third of them suffered from contused and lacerated wounds. The Coroner urges the early and free use of anti-tetanic serum, to the end that mortality from tetanus may be reduced.—*Exchange*.

PERSONALS.—Dr. Sison, a Filipino, has recently been made chief of the medical staff of the Philippines General Hospital, the greatest hospital in the Orient. Both Dr. Sison and his wife, who is also a native of the Philippine Islands, were graduated from the University of Pennsylvania Medical School in 1908.

REMOVALS.—Dr. B. F. ~~Bromer~~, from Longleaf, La., to McNary.
—Dr. M. M. Thompson, from Independence, La., to Kevil, Ky.

Dr. C. L. Vines, from Longleaf, La., to Lisbon, Ark.

Dr. F. O. Brinkley, from Stonewall, La., to Gloster.

Dr. Edgar B. ~~Hands~~, from 205 Stoner Ave., Shreveport, La., to 250 Stoner Ave.

—Dr. T. M. Roach, from Gilmer, Tex., to Bettie.

DIED.—On April 29, 1912, in Chicago, Ill., Dr. Daniel Kimball Pearson, aged 92 years.

TULANE NOTES.

The Commencement Exercises on May 29 closed the session of 1911-1912. The Commencement in 1913 will be on June 4. The session will begin September 30.

The University has delegated Dr. Creighton Wellman to represent the Medical Department at the Congress on Hygiene and Demography, meeting in Washington in September.

Alumni reunions of graduates of the Medical Department were

held at the Texas State Association meeting in Waco, May 9, and at the Arkansas State meeting, at Hot Springs, May 15. Dean Dyer was at the Texas meeting and at the Arkansas meeting also, together with Dr. C. W. Allen. The Texas meeting elected as officers Dr. O. L. Norsworthy ('95), of Houston, President; Dr. I. E. Colgin ('08), of Waco, Vice-President, and Dr. Marion M. Brown ('07), of Wortham, Secretary-Treasurer. The new officers of the Arkansas Alumni are Dr. W. E. Parker ('91), of Hot Springs, President; Dr. C. R. Shinault ('90), of Little Rock, Vice-President, and Dr. E. H. Hunt ('09), of Little Rock, Secretary-Treasurer.

The Tulane Medical Department has been officially notified by the Secretary of the Conjoint Examining Board of the Royal College of Physicians of London and the Royal College of Surgeons of England that graduates of Tulane will hereafter be recognized as eligible for the examination for membership in these bodies.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of respective publications. The acceptance of a book implies no obligation to review.

Surgical Treatment, by SIR W. WATSON CHEYNE and F. F. BURGHARD. Lea & Febiger, Philadelphia and New York, 1911.

This manual of surgical treatment is an up-to-date exposé of British surgical teaching and practice.

The mere mention of Watson Cheyne and Burghard is a sufficient indication of the value of the work, which, after twelve years, is now appearing as a second edition.

Due acknowledgment is given by the authors to their able collaborators, Legg, Edmunds and others, who were eminently qualified for the task.

The book is the first of five volumes, and embraces the treatment of general surgical diseases with the fundamentals of surgical pathology.

The last portion of the present volume, by Drs. Silk and W. D'Este Emery, has one of the best presentations of two important subjects, viz: anesthetics and the examination of the blood in surgical conditions.

LARUE.

Transactions of the American Surgical Association. Printed by Wm. J. Donovan, Philadelphia, 1911.

The twenty-ninth volume of the transactions of this select body of American surgeons is, like the preceding ones, well worth reading. A

number of papers were read at the Denver meeting, and, although all are of a high order, some are of particular interest.

The President, Dr. Richard H. Harte, of Philadelphia, delivered a carefully-prepared and timely address, replete with wise counsel, especially concerning the open treatment of fractures. This subject was indeed presented in due time and place, and thoroughly discussed.

Dr. Harold J. Stiles, of Edinburgh, the guest of the association, read a most interesting and concise paper on a condition which, although rare, nevertheless elicited some important discussion. The title of his paper was "Epispadias in the Female, and Its Surgical Treatment, with a Report of Two Cases." The author cursorily refers to Dr. Matas' series of experiments by the Mayo operation. Dr. Stiles is a surgeon of great stamp, which can readily be perceived by scanning his pithy remarks in the various discussions.

Anesthetics, a subject so important to medical men in general, consumed much of the time. Many papers, including one by Dr. Edmond Souchon, pertaining thereto, were read and debated.

The following papers, among others, are, we think, especially worthy of mention: "Arteriovenous Anastomosis in the Treatment of Gangrene of the Extremities," "A Study of Pyloroptosis," "Ulcer of the Stomach and Duodenum, with Special Reference to the End Result," "Operations on Brain Tumors," and, not the least, the paper by Dr. Mears on "The Triumph of American Medicine in the Construction of the Panama Canal."

LARUE.

Publications Received.

LEA & FEBIGER, Philadelphia and New York, 1912.

A Pocket Formulary, by E. Quin Thornton, M. D. Tenth edition, revised and enlarged.

A Manual of Surgical Treatment, by Sir W. Watson Cheyne, C. B., D. Sc. LL.D., F. R. C. S., and F. F. Burghard, M. S., F. R. C. S. New edition, entirely revised and largely rewritten, with the assistance of T. P. Legg, M. S., F. R. C. S., and Arthur Edmunds, M. S., F. R. C. S.

REBMAN COMPANY, New York, 1912.

A Manual of Clinical Chemistry, Microscopy and Bacteriology, by Dr. M. Klopstock and Dr. R. A. Kowarsky.

P. BLAKISTON'S SON & CO., Philadelphia, 1912.

Lateral Curvature of the Spine and Round Shoulders, by Robert W. Lovett, M. D.

The Ocular Muscle, by Howard F. Hansell, A. M., M. D., and Wendell Reber, M. D.

PAUL B. HOEBER, New York, 1912.

Compendium of Diseases of the Skin, by L. Duncan Buckley, A. M., M. D.

F. A. DAVIS COMPANY, Philadelphia, 1912.

The New Pocket Medical Formulary, by Edward Fitch, M. D.

W. M. LEONARD, Boston, 1912.

The Care of the Insane, and Hospital Management, by Chas. Whitney Page, M. D.

W. B. SAUNDERS COMPANY, Philadelphia and London, 1912.

The Surgical Clinics of John B. Murphy, M. D. April, 1912.

Miscellaneous.

Second Annual Report of the Rockefeller Sanitary Commission for the Eradication of Hookworm Disease. (Offices of the Commission, Washington, D. C., 1911.)

Physiological Studies in Anaphylaxis, by W. H. Schultz, M. D. Washington Government Printing Office, 1912.)

Annual Report of the Bureau of Health for the Philippine Islands for the Fiscal Year Ending June 30, 1911. (Manila Bureau of Printing, 1911.)

The Necessity for Safe Water Supplies in the Countries of Typhoid Fever, by Allan J. McLaughlin, M. D. (Washington Government Printing Office, 1912.)

Vaccination, by J. W. Kerr, M. D. (Washington Government Printing Office, 1912.)

New and Non-Official Remedies. American Medical Association, Chicago, 1912.)

Municipal Ordinances, Rules and Regulations Pertaining to Public Hygiene. (Washington Government Printing Office, 1912.)

Sixth Annual Report of the Henry Phipps Institute for the Study, Treatment and Prevention of Tuberculosis.

The Bacteriological Diagnosis of Cholera. English translation by H. D. Geddings. (Washington Government Printing Office, 1912.)

Report of the Department of Sanitation of the Isthmian Canal Commission for the Month of February, 1912. (Washington Government Printing Office, 1912.)

Reprints.

Personal Reminiscences of Lord Lister; The Introduction and Development of Antiseptic Surgery in America, by H. O. Marcy, A. M., M. D., LL. D.

The Red Blood Corpuscles and Hæmoglobin of Healthy Adult American Males Residing in the Philippines; Observations on the Influence of the Philippine Climate on White Men of the Blonde and of the Brunette Type; The Occurrence in the Philippines of the Associated Spirochætæ and Fusiform Bacilli—Ulcers of the Throat (Vincent's Angina), of the Mouth, and of the Skin, and in Lesions of the Lungs (Bronchial Spirochætosis); The Study of the Systolic Blood Pressure and the Pulse Rate of Healthy Adult Males in the Philippines, by Weston P. Chamberlain.

The Cure of Infantile Beriberi, by the Administration to the Infant of an Extract of Rice Polishings, and the Bearing Thereof on the Etiology of Beriberi, by Major Weston P. Chamberlain and Captain Edward B. Vedder.

The Direct Determination of Creatine in Pathological Urine, by G. S. Walpole, D. Sc., F. I. C.

Some Derivatives of 4 (or 5) in Methylglyoxaline, by Arthur James Ewins, B. Sc.

The Constitution of Ergothioneine: a Betaine Related to Histidine, by George Barger, M. A., D. Sc., and Arthur James Ewins, B. Sc.

The Physiological Action of Indolethylamine, by P. P. Laidlaw, M. A., B. C.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans
FOR APRIL, 1912.

CAUSE.	White.	Colored.	Total.
Typhoid Fever.....	2	2	4
Intermittent Fever (Malarial Cachexia).....	1	1	2
Smallpox.....			
Measles.....			
Scarlet Fever.....	1		1
Whooping Cough.....	1	1	2
Diphtheria and Croup.....	1	1	2
Influenza.....	3	5	8
Cholera Nostras.....			
Pyemia and Septicemia.....			
Tuberculosis.....	37	51	88
Cancer.....	21	5	26
Rheumatism and Gout.....			
Diabetes.....	4		4
Alcoholism.....	1		1
Encephalitis and Meningitis.....	5	3	8
Locomotor Ataxia.....	2		2
Congestion, Hemorrhage and Softening of Brain.....	17	10	27
Paralysis.....	5		5
Convulsions of Infants.....	3		3
Other Diseases of Infancy.....	10	1	11
Tetanus.....		4	4
Other Nervous Diseases.....	3		3
Heart Diseases.....	46	40	86
Bronchitis.....	2	4	6
Pneumonia and Broncho-Pneumonia.....	13	21	34
Other Respiratory Diseases.....	2	3	5
Ulcer of Stomach.....	2		2
Other Diseases of the Stomach.....	1	1	2
Diarrhea, Dysentery and Enteritis.....	16	11	27
Hernia, Intestinal Obstruction.....	3	1	4
Cirrhosis of Liver.....	11	4	15
Other Diseases of the Liver.....	2	1	3
Simple Peritonitis.....			
Appendicitis.....	3	3	6
Bright's Disease.....	31	23	54
Other Genito-Urinary Diseases.....	6	4	10
Puerperal Diseases.....	2	3	5
Senile Debility.....	6		6
Suicide.....	6	1	7
Injuries.....	18	12	30
All Other Causes.....	27	12	39
TOTAL.....	314	228	542

Still-born Children—White, 19; colored, 24; Total, 43.

Population of City (estimated)—White, 272,000; colored, 101,000.

Total, 373,000.

Death Rate per 1000 per Annum for Month—White, 13.85; colored, 27.08; Total, 17.43.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure.....30.02
Mean temperature.....70.
Total precipitation.....8.62 inches
Prevailing direction of wind, south.

Paullum sepultæ distat inertie Celata virtus.

New Orleans Medical and Surgical Journal

ESTABLISHED 1844

EDITORS:—CHAS. CHASSAIGNAC, M.D. and ISADORE DYER, M.D.

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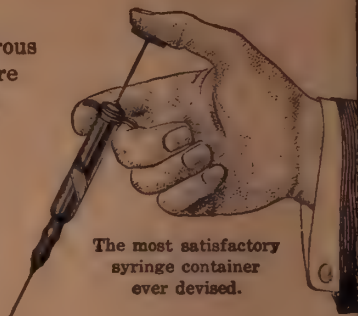
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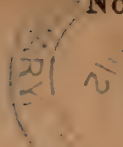
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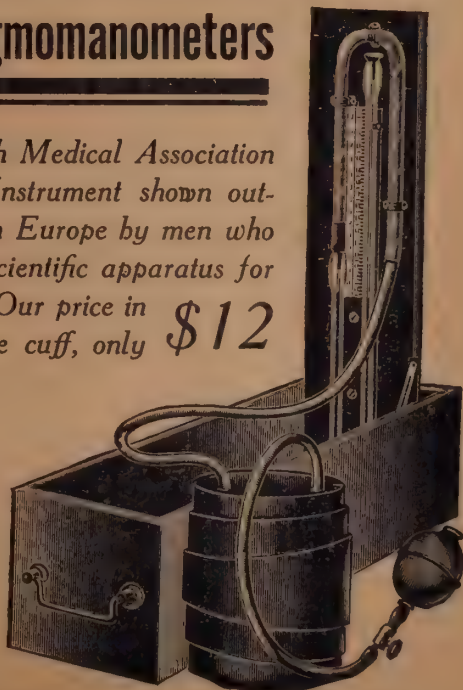
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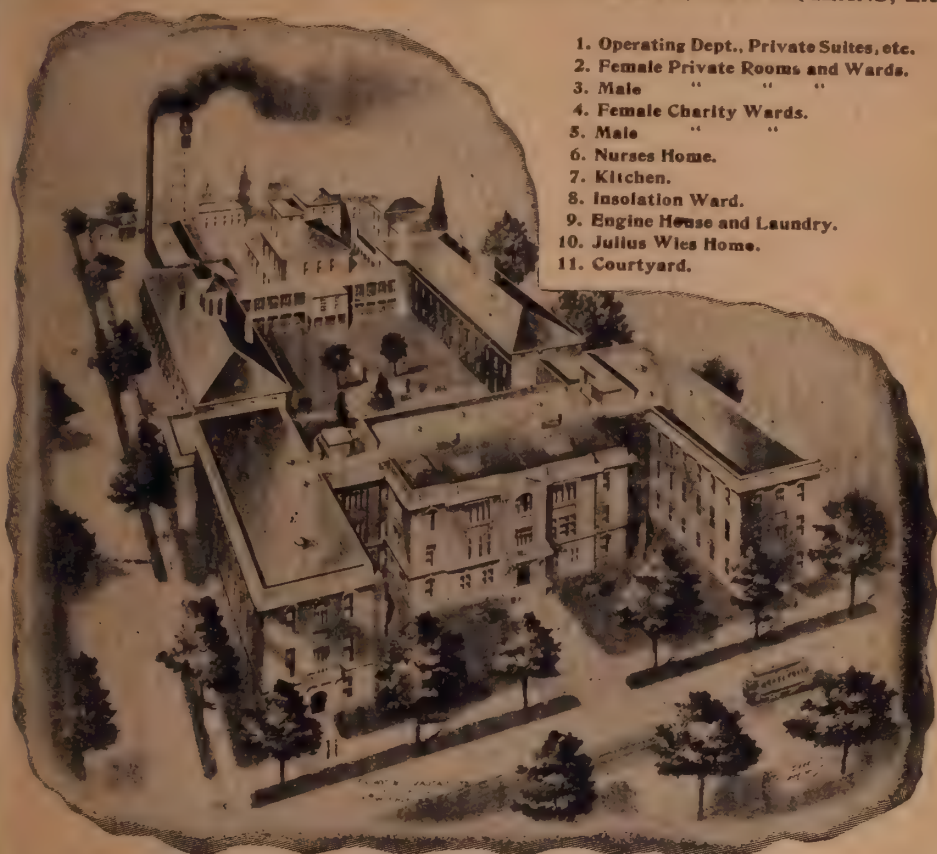
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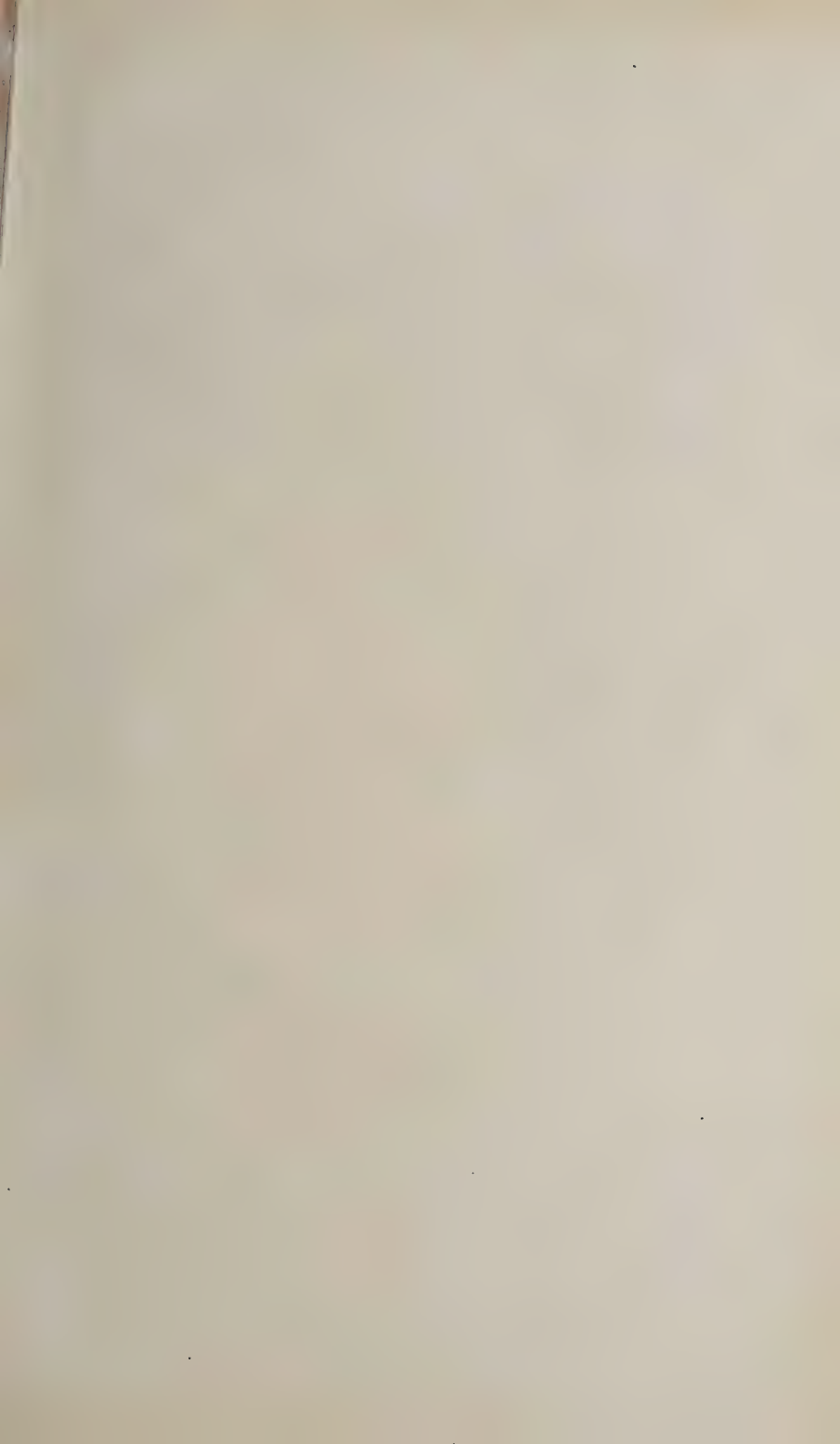
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